Ex Hibit

Filder

P+. Z

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	renewal the original sample?		
37.	Was the daily photoperiod 16 hours light/8 hours dark?		
38.	Were the surviving organisms counted daily in all test chambers?	1	
39.	Was the test terminated at 48±1 hours (less than 47 hours invalidates the test) or 96±1 hours (less than 95 hours invalidates the test)?	-	
40.	Was the percent survival in each concentration recorded at the end of the test?	1	
41.	Was the percent survival in the controls ≥90%?	1	
42.	Was the LC ₅₀ correctly determined?	~	
43.	If the acute test was run in conjunction with a chronic test using the same species, was the acute test initiated with the second or third sample pulled for the chronic test? (Any sample other than the same sample used to initiate the chronic test is acceptable.)	N4	

Items in bold type (and shaded) are significant in that if they are answered "NO", the test is automatically deemed "not acceptable" and must be repeated to fulfill permit TMP requirements. Bold type items are numbers 3, 5, 8, 12, 15, 25, 26, and 41.

RESPONSE GUIDE

1 8.	Response should be "YES" or note the problem in the review	water out
9 10.	If 9. is "NO", then 10. must be "YES" or the test is not acceptable	" then In
11 13.	If 11. is "YES", then 12. and 13. must be "YES" or the test is not accept	otable "
14 17.	If 14. is "NO", then 15., 16. and 17 must be "YES" or the test is not acc	
18 43.	Response should be "YES" or note the problem in the review	*

RATING

ACCEPTABLE	NOT ACCEPTABLE

Comments

BIOLOGICAL MONITORING, INC. Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Anthony Smith

NPDES Permit #: VA0003867

Experiment ID#: OMP091301-2

Test Organism: Mysidopsis bahia

Test Type: Static Acute

Organism Age at Start of Test: 4 d

Sample Tested: Outfall 002

Sample Type: Composite

Sample Collection Frequency and Dates and Times: From 09/11/01 @ 0700 to 09/12/01 @ 0700

Sample Collector: J.R. Hall Delivered by: J.R. Hall

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 091101

Test Temperature: 25 ± 1 °C

No. of Replicates per conc.: 4 No. of Organisms per Replicate: 5

Feeding prior to test: Normal Feeding Regime: 2x daily

Chamber Size: 800 mL PP Test Volume: 450 mL

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 09/13/01 Time: 1620

End of Test: Date: 09/15/01 Time: 1530

Equipment:

pH Meter: SA 720 (A) DO Meter: YSI 58 (b) SCT Meter: YSI 33 (A)

°C Measurement: Calibrated Thermometer

Salinity: SCT Meter

Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

BIOLOGICAL MONITORING, INC. Acute Toxicity Test Data Summary

Client	Omega Protein	NPDES PERMIT #: VA0003867							
Test Organism	Mysidopsis bahia		Date	Time					
Experiment	OMP091301-2	Start Test	09/13/01	1620					
ID Sample Tested	Outfall 002	End	09/15/01	1530					
		Test							

RESULTS

		Water Chem	istry Analyses		
		(Rai	nge)		
Conc.	Тетр. (°С)	D.O. (mg/L)	РĦ	Salinity (ppt)	Surviva (%) 48 h
0	25	7.6-7.8	7.9-8.0	25	100
100	25	6.9-7.0	7.9	25	100

STATISTICAL ANALYSES

Test Method	LC50 (%)	95% Fiducial (Confidence) Limits
N/A	N/A	N/A
		Fmortality. NOAEC = 100%.

TAV	LOITY	TECT	DATA	CHEET
LOX	ICIIY	1 - 5 1	рдід	SHEET

Page of
\$
ABSUTINI
AI - /
Age: 48 40

Experiment I.D. #: OMPO91301-Z NPDES Permit #:	UA QUU 3867 Project Scientist: A. Jm H
Client: Omesa Protein	ac Officer: NATHAMMACEASON
Effluent/Sample: NPU913U1-2 (Until ULZ)	Test Organism; Species: M. balic Org. Batch # ABSUTIU)
Sample Container: PC	Number of Organisms per Concentration: 20 Age: 48-40
Sample Type: Date and Time of Collection:	Dilution Water Used: Syn. Seamater Batch 1: 091101
Grab: Date: Time:	Test Temperature: 25±1°C ASII
Toronto Color Color	Time: 0700 Start of Test: Date: 9//3/01 Time: 1625
Test Mode: State Acute Test Duration: 48L	End of Test: Date: 9/15/61 Time: 1580 1530

Carre Carre	Test Cent	1	Numb		Live			Diss	olved mg/L)		en			pН			Sa	llinity	0/00					rature		
		0	24	48	72	14	۰	24	48	72	16	0	24	48	72	9.0	0	24	48	72	1		24	48	72	16
ð	A	5	5	5			1.6		7.8			8.0		7.9			25		25			25	25	25		
	3	5	5	5																		, s				
	Ċ	5	5	5													7_									
	Þ	5	5	S																						
100	A	5	5	3			7.0		69			7.9		79			25		25			25	25	35		
	D	7	5	2									.e													
	L	5	5	5																						
	D	7_	5	5																						
è																										
						_																				
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Ascord	ed By:	AS	BAN	NN	-		A\$7		NM			Ø5		NW			125		m			A	M	NM		

[•] mg/L as CaCO,

Experiment I.D. #: <u>OMP 091301-2</u>

BIOLOGICAL MONITORING, INC. Toxicity Test Procedure Check Sheet

Page Z of Z

Concentration mg/L other	Diluent(mLs)	Effluent(mLs)	Total(mLs)	Are all test chambers properly labeled?
0	1000	0	1000	Specify vessel type and volume used to measure and deliver effluent
100	0,	Joa	Juou	diluent to test chambers: Graduated cylinder(s) 2000
				Volumetric flask(s) 1000 500 200 100 Pipet(s) 10 5 1 Other Specify material (s) used to place test organisms into test
			1	chambers: Wide bore pint
stal Vessel Capacity st Solution Volume ater Depth Constant	SOULL Prete	Daily: 2x	Aeration Pretest: None: Slow:(bubbles/min	Fotal Chlorine of sample upon arrival (mg/L)
otal Vessel Capacity st Solution Volume	: 500 LL Prete : 450 in Not f : X Fed I	st Feeding:	Aeration Pretest: None: Slow: Moderate:	Fotal Chlorine of sample upon arrival (mg/L)
stal Vessel Capacity st Solution Volume ater Depth Constant	: 500 M Prete: 450 in Not fi	st Feeding: ed: Daily:	Aeration Pretest: None: Slow: Moderate: Vigorous:	Total Chlorine of sample upon arrival (mg/L)
otal Vessel Capacity st Solution Volume ater Depth Constant Cyclic:	: 500 M Prete: 450 in Not fi	regularly (describe)	Aeration Pretest: None: Slow: Moderate: Vigorous:	Total Chlorine of sample upon arrival (mg/L)
	Fed in Type g organisms at end of t	regularly (describe)	Aeration Pretest: None: Slow: Moderate: Vigorous:	Total Chlorine of sample upon arrival (mg/L)

C:\My Documents\Admin Asst\SOP Figures '98\Figure 31B - Tox Test Procedure

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name OMEGA Protein	5. Purchase order no
10114	6. Affiliation
	7. NPDES permit no./County
	8. Test period for which data is being submitted:
9. Sample relinquished by: JR. Hall 9/12	Date;Received by:Date
Sample relinquished by:/_	Date;Received by:Date
Description of Sample 10. Type of sample collected: Grab Date collected Time collected Volume	ing Methods and Equipment Composite Composite type Collection period: from 9-/1-0 (date) 7 & M (time) to 9-12-01 (date)
11. Flow during sampling 307, 300 12. Type of container I-Gal. Plas Hc 13. Number of containers shipped I	14. No. of subsamples
Condition of Efflu	ent at Time of Collection
17. pH 7. 12 18. Chlorine 19. Temperature: At collection point In collection device (comp. sample must be @ o	20. Is the sample: Chlorinated Dechlorinated Unknown Dechlorination method
Shippin	ng Information
21. Method of shipment Delivered 22. Date sh 24. Was the sample packed with ice for shipment? 25. Custody seal in place by 1. R. Hall	
Instru	ctions to Lab
26. Type of test(s) to be performed	28. Should ammonia be measured? (Yes or No)
30. I certify that the above information is c	orrect
***	************************
Hard NA	MI Use Only Date 9/13/-1 Time 1834
Upon arrival at BMI: Custody seal 455 Ten	Date 7/3/4 Time 1/3/ nperature 1 PH 7.5 Chlorine DO 7.8 Salinity O put Conductivity 190%
Visual description gream	Sample refrigerated yes
Test ID number(s) nMbyq1301-2	*

BIOLOGICAL MONITORING, INC. **Toxicity Test Condition Summary**

Client: Omega Protein

Prepared by: Anthony Smith

NPDES Permit #: N/A

Experiment ID#: RT0091301-2

Test Organism: Mysidopsis bahia

Test Type: Static Acute Reference Toxicant

Organism Age at Start of Test: 4 d

Sample Tested: Sodium Lauryl Sulfate

Sample Type: Product

Sample Preparation Dates and Times: 09/13/01 @ 1215

Sample Prepared by: A. Smith

Delivered by: N/A

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 091101

Test Temperature: 25 ± 1 °C

No. of Replicates per conc.: 2

No. of Organisms per Replicate: 10

Feeding prior to test: Normal

Feeding Regime: 2x daily

Chamber Size: 800 mL PP

Test Volume: 350 mL

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 09/13/01

Time: 1705

End of Test: Date: 09/15/01

Time: 1615

Equipment:

pH Meter: SA 720 (A) DO Meter: YSI 58 (b) SCT Meter: YSI 33 (A)

°C Measurement: Calibrated Thermometer

Salinity: SCT Meter

Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

BIOLOGICAL MONITORING, INC. Acute Toxicity Test Data Summary

Client	Omega Protein	NPDES	NPDES PERMIT #: N/A						
Test Organism	Mysidopsis bahia		Date	Time					
Experiment ID	RT091301-2	Start Test	09/13/01	1705					
Sample Tested	Sodium Lauryl Sulfate	End Test	09/15/01	1615					

RESULTS

		Water Chemi (Rai	istry Analyses nge)		
Conc. ppm	Temp. (°C)	D.O. (mg/L)	Нq	Salinity (ppt)	Survival (%) 48 h
0 1.25 2.5 5	25 25 25 25 25 25 25	6.9-7.0 6.8-6.9 6.8-6.9 5.8 6.6-6.7 6.6-6.8	8.0-8.2 7.9-8.2 7.9-8.2 7.9-8.2 7.8-8.2 7.8-8.2	25 25 25 25 25 25 25	100 100 100 0 85

STATISTICAL ANALYSES

Test Method LC50 (ppm)	
Trimmed Spearman- 6.411 Karber	5.027-8.177

TOX	ICIT	Y .	T F	ST	D A	TA	SH	F	F٦

10.210	SIT TEST DATA SHEET	1 896 0
	UA Project Scientist: A. Smith	
Client: BMI	ac Officer: NATE MARSASON	
Effluent/Sample: RT091301-2097 (Sci)		ABS091101-2
Sample Container: PC-lc_ss	Number of Organisms per Concentration: 20	Age: 4d
Sample Type; Date and Time of Collection: PRODUCT	Dilution Water Used: Syn. Sewater Batch #: 5	Ja 110 1
Grab: Date: Time:	Test Temperature: 25±110	
Composite: From: Date:Time:To: Date:	Time: Start of Test: Date: 9/15/01	Time: 1705
Test Mode: Static Acute Test Duration: 48h	End of Test: Date: 9/15/01	Time: 1615

Conc or %	Test Cont	1	Org	er of anisr					lved ng/L)	Охуде	n			рH			Sa	linity	0/00			ד	empe	rature	(°C)	
ppm		٥	24	48	72	34	0	24	48	72	24	0	24	48	72	16	0	24	48	72	34	•	24	48	72	04
0	A	10	10	10		7	6.9		7,0			8.4		8.0			25		25			25	25	25		
	B	10	10	10																			35	25		_
1.25	A	/u	10	10			6.8		6.9			8.2		7.9			25		25			5	25	25		_
	ST.	10	io	10																			0,5	23		_
3.5	A	ĺυ	io	10			64		6,9			8.2		7.9			2/		25			25	25	25		ـــ
	3	10	10	10													ļ.,		10F			-	25	ವಿತ		
7_	A	10	10	0			68		6.8			8.2		7.9			25		92			27	25	25		┡
	B	10	10	0	_														<u></u>		<u> </u>		28	32		⊢
lo	A	/u	9	q								8.2		7.8			7,7		25		-	25		25		├_
	य	10	9	8		_	6.7		6.0		غد	-		~ -				ļ	10.4		1	ļ	3 <u>₹</u>	25		├-
⋜σ *	A	10	5	Ш					2 11			8.2		7.8			75		25		-	5/-	25	35		-
	区	/0	0	0			6.4		68														25	ನಿ೯		
					-		-				-						-		-		-					\vdash
															-				-							
Accord		1	344	almo			(N		NO			1		Nu			A		Nn		1		Win	4 700		

mg/L as CaCO,

BIOLOGICAL MONITORING, INC. Toxicity Test Procedure Check Sheet

Page	of
rave	O1

Concentration % mg/L other	Diluent(mLs)	Effluent(mLs)	Total(mLs)	Are all test chambers properly labeled? // PS
0	1000	. 0	1000	Specify vessel type and volume used to measure and deliver effluent ar
1.25	987.5	12.5	1000	diluent to test chambers: Graduated cylinder(s) 2000 1000 500 250
2.5	975	25	1000	Graduated cylinder(s) 2000
5	950	GZ	1000	Volumetric flask(s) 1000500200100
10	700	100	1000	Pipet(s) 10 5 1 Other
20	800	200	1000	Specify material (s) used to place test organisms into test
			3	Total Chlorine of sample upon arrival (mg/L) (0.01 Total Chlorine of sample after dechlorination (mg/L) NA
	e.		μ	Total Chlorine of sample upon arrival (mg/L) <0.01 Total Chlorine of sample after dechlorination (mg/L) WA
xposure Chamber otal Vessel Capacity	r: 80ml Fee	ling Schedule est Feeding:	Aeration Pretest:	Total Chlorine of sample upon arrival (mg/L) <
otal Vessel Capacity	Pret	est Feeding:	Pretest:	Total Chlorine of sample upon arrival (mg/L) <
otal Vessel Capacity est Solution Volume ater Depth Constan	Fed	est Feeding: fed: Daily:	Pretest: None: Slow: (bubb	Total Chlorine of sample upon arrival (mg/L) Total Chlorine of sample after dechlorination (mg/L) Screened Animal Enclosures Not Used: Used: Used: Dies/min) Photoperiod:
otal Vessel Capacity est Solution Volume ater Depth Constan	Fed	est Feeding:	Pretest:	Total Chlorine of sample upon arrival (mg/L) < 0.0 (Total Chlorine of sample after dechlorination (mg/L)
otal Vessel Capacity est Solution Volume ater Depth Constan	Fed	est Feeding: fed: Daily:	Pretest: None: Slow: (bubb	Total Chlorine of sample upon arrival (mg/L) Total Chlorine of sample after dechlorination (mg/L) Screened Animal Enclosures Not Used: Used: Used: Dies/min) Photoperiod: 16h/8h: other: Organism pretest treatment
otal Vessel Capacity st Solution Volume ater Depth Constan Cyclic:	Fed	est Feeding: fed: Daily: irregularly (describe) of Food: test:	Pretest: None:	Total Chlorine of sample upon arrival (mg/L)

SPEARMAN-KARBER

TRIM:

5.00%

LC50: 95% LOWER CONFIDENCE: 6.411

95% UPPER CONFIDENCE:

5.027 8.177

CONC.	NUMBER	NUMBER	PERCENT	BINOMIAL
mag	EXPOSED	DEAD	DEAD	PROB.(%)
1.25	20.	0.	.00	.9537D-04
2.50	20.	0.	.00	.9537D-04
5.00	20.	20.	100.00	.9537D-04
10.00	20.	3.	15.00	.1288D+00
20.00	20.	19.	95.00	.2003D-02
_				

THE BINOMIAL TEST SHOWS THAT 2.50 AND 20.00 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.9979 PERCENT. AN APPROXIMATE LC50 FOR THIS DATA SET IS 8.106

RESULTS USING MOVING AVERAGE

SPAN G LC50 95% CONFIDENCE LIMIT 4 .066 6.47 5.11 8.49

***** RESULTS CALCULATED BY PROBIT METHOD

6.330

20.34

ITERATIONS G H GOODNESS OF FIT

.00

A PROBABILITY OF 0 MEANS LESS THAN 0.001

SLOPE = 2.32

95% CONFIDENCE LIMITS: -3.52 AND 8.16

6.89

95% CONFIDENCE LIMITS: 0 AND + INFINITY

. 68 $T_1C_11 =$

95% CONFIDENCE LIMITS: 0 AND 5.71

DURATION: 48 hous

DATE: 9/13/01 SAMPLE: sls

TEST NUMBER: RT-2

SPECIES: M. bahia

CONFIDENCE LIMITS METHOD LC50 LOWER UPPER SPAN 2.500 20.000 17.500 2.500 BINOMIAL 8.106 8.489 3.374 6.471 5.115 6.887 ****** 5.115 rkobit Spearman ***** 8.177 3.150 5.027 6.411

NOTE: MORTALITY PROPORTIONS WERE NOT MONOTONICALLY INCREASING. ADJUSTMENTS WERE MADE PRIOR TO SPEARMAN-KARBER ESTIMATION.

**** = LIMIT DOES NOT EXIST

Project Manager: A. Smith	Date: 9/11/01
Assigned to:	Test Start Date: 9/11/01
Client: Omega Paten	Client's P.O.#:
Test ID#: <u>OMPO9/10/~/</u>	BMI Project#: 3/84
Test Description: 570 CV	Test Prefix: OMP
Test Conditions (Circle Approriate Choice)	
Acute/Chronic	0 10 1/ 200
Organism: P.p., D.p., D.m., C.d., M.b., ev. H.a., Ct Other:	Toxicant: <u> </u>
Duration: 24h, 48h, 96h, (d.,)0d, Renew at: 24h, 48h, 96h, daily, none,	Test Vol: 300 N Chamber: 600 N
Other: 0, 0, 5, 1, 2, 51, 100	IWC: 2
Replicates: 1, 2, 3, 4, 8, 10 Diluent: Mary, Surface, Sagn. sea fit.	Other:
Temperature: $12 \pm 1^{\circ}$ C, $20 \pm 1^{\circ}$ C, $23 \pm 1^{\circ}$ C, $25 \pm 1^{\circ}$ C. Test Salinity: Preshwater, 13 ppt, 20 ppt	5 e
Feeding: 1x daily, 2x daily, 3 x daily, none, as specified_	
Dechlorination Sample: Yes/Yes (Circle One) pH Adjustment to be done: Yes/Yes	
Extra Controls:	
Special Conditions:	
Comments:	

Project Manager: A Smith	Date: 9/11/01
Assigned to:	Test Start Date: 9/13/01
Client: Jonesa Protein	Client's P.O.#:
Test ID#: <u>OMPO91101-3</u>	BMI Project#: 3/8/
Test Description: SAC	Test Prefix: OMP
Test Conditions (Circle Approriate Choice)	
Acute/Chronic	A 1/11 001
Organism: P.p., D.p., D.m., C.d., M.b., C.v, H.a., Ct	Toxicant: Cuthul COG Permit No.#: VAppo 3867
Duration: 24h, 48h, 96h, 7d, 10d, Renew at: 24h, 48h, 96h, daily, 10ne,	Test Vol: 350 ml Chamber: 800 ml
Concentrations [0, 6.25, 12.5, 25, 50, 106%] Other:	IWC: 2
Replicates: 1, 23, 4, 8, 10 Diluent: MHRW, Surface Syn. Security	Other:
Temperature: $12 \pm 1^{\circ}$ C, $20 \pm 1^{\circ}$ C, $23 \pm 1^{\circ}$ C, $25 \pm 1^{\circ}$ C Test Salinity: Freshwater, 13 ppt, 20 ppt	*
Feeding: 1x daily, 2 x daily, 3 x daily, none, as specified_	
Dechlorination Sample: Yes/No (Circle One) pH Adjustment to be done: Yes/No	
Extra Controls:	
Special Conditions:	
Comments:	

Project Manager: A. Smith Assigned to:	Date: 9/11/01 Test Start Date: 9/13/01
Assigned to.	-7-7
Client: Imega Frolein	Client's P.O.#:
Test ID#: <u>MPO91101-2</u>	BMI Project#: 3/84
Test Description: AML	Test Prefix: OMP
Test Conditions (Circle Approriate Choice)	
Acute/Chronic	2 50
Organism: P.p., D.p., D.m., C.d., M.b., C.v., H.a., Ct	Toxicant: 0. Hall 002 Permit No.#: VA 0003867
Duration: 24h, 48h, 96h, 7d, 10d, Renew at: 24h, 55h, 96h, daily none,	Test Vol: 48 ml Chamber: 80 ml
Concentrations: [0, 6.25, 12.5, 25, 50, 100%] Other:	IWC: /ou
Replicates: 1, 2, 3, 3 8, 10 Diluent: MHRW, Surface Sym, Sewuth	Other:
Temperature: $12 \pm 1^{\circ}$ C, $20 \pm 1^{\circ}$ C, $23 \pm 1^{\circ}$ C, $25 \pm 1^{\circ}$ C. Test Salinity: Freshwater, 13 ppt, 20 ppt	5983
Feeding: 1x daily, 2 x daily, 3 x daily, fone, as specified_	
Dechlorination Sample: Yes/No (Circle One) pH Adjustment to be done: Yes/No	
Extra Controls:	
Special Conditions:	
Comments:	

BIOLOGICAL MONITORING, INC. **Toxicity Test Condition Summary**

Client: Omega Protein

Prepared by: Anthony Smith

NPDES Permit #: N/A

Experiment ID#: RT0091301-1

Test Organism: Cypinodon variegatus

Test Type: Static Acute Reference Toxicant

Organism Age at Start of Test: 3 d

Sample Tested: Sodium Lauryl Sulfate

Sample Type: Product

Sample Preparation Dates and Times: 09/13/01 @ 1215

Sample Prepared by: A. Smith

Delivered by: N/A

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 091101

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 2

No. of Organisms per Replicate: 10

Feeding prior to test: Normal

Feeding Regime: Not fed

Chamber Size: 800 mL PP

Test Volume: 350 mL

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 09/13/01

Time: 1700

End of Test: Date: 09/15/01

Time: 1600

Equipment:

pH Meter: SA 720 (A) DO Meter: YSI 58 (b) SCT Meter: YSI 33 (A)

°C Measurement: Calibrated Thermometer

Salinity: SCT Meter

Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

BIOLOGICAL MONITORING, INC. Acute Toxicity Test Data Summary

Client	Omega Protein	NPDES PERMIT #: N/A						
Test Organism	Cyprinodon variegatus		Date	Time				
Experiment	RT091301-1	Start	09/13/01	1700				
· ш		Test						
Sample Tested	Sodium Lauryl Sulfate	End	09/15/01	1600				
·		Test						

RESULTS

		Water Chem	istry Analyses						
(Range)									
Cone. ppm	Temp. (°C)	D.O. (mg/L)	Ħq	Salinity (ppt)	Survival (%) 48 h				
0	25	7.6-7.8	8.0-8.2	25	100				
1.25	25	6.9-7.4	8.0-8.2	25	100				
2.5	25	6.8-7.0	8,0-8.2	25	5				
5	25	4.6-6.8	8.0-8.2	25	0				
10	25	4.2-6.7	7.9-8.2	25	0				
20	25	3.8-6.7	8.0-8.2	25	0				

STATISTICAL ANALYSES

Test Method	LC50 (ppm)	95% Fiducial (Confidence) Limits
Spearman-Karber	1.830	1.711-1.958
COMMENTS:		

			¥	τοχῖι	CITY TEST DATA S	HEET	Page of
Exp	erimen	i.D. #	: TTO91301-1	NPDES Permit #:	NA Proj	ect Scientist: A. Smith	~
Clie	nt:	IMI			ac Officer: NATE MARG	Ason	
Effic	uent/Sa	mple:_	RT091301-2097 (SUS)	Test Organism; Species: 📉	L. C. vooriegents Org. Batch	1 # ABS091101-1
			: Class		Number of Organisms per Co	oncentration: 20	. Age: 3d
am	ple Ty	pe; Da	te and Time of Collection:	Product	Dilution Water Used:	Mefic Securitar Batch	1: 091101
				īme:	Test Temperature:	<u>= (</u>	
Com	nposite	: From	: Date:Time:	To: Date:	Time: Start of Te	est: Date: <u>9//3/4</u>	Time: 1700
rest	t Mode	: 56	tic Acute Test Dura	tion: <u>484</u>	_ End of Te	st: Date: 9/15/21	Time: 1600
	Conc or %	Test Cork	Number of Live Organisms	Dissolved Oxygen (mg/L)	рН	Salinity 0/00	Temperature (°C)

Conc or %	Test Cork	1	Numb Org	er of anisr					olved ng/L)	Охуд	en			рΗ			Sa	llinity	0/00				rempe	rature	(°C)	
ppn		0	24	48	72	34	0	24	48	72	9.6	0	24	48	72	14	•	24	48	72	14	0	24	48	72	14
0	A	10	10	10			7.4		7.8			8.2		80			25	र्	25			25	25	25		
	B	10	10	10																				25		
1.25	PA	10	10	io			6.9		7.4			8.2		8,0			25	25	25			25	25	25		
	В	10	10	10																				25		
3.5	r	10	1	1			6.8		7,0			8.2		8,0			25	25	25			2.5	25	95		
	B	10	3	0																				35		
5	A	10	0				6.8	4.6				8.2	8.0				2	25				25	25		Ila	
	B	10	0														_							25		
10	A	10	0				6.7	4.2				8.2	79.9				25	25	ļ		_	75	25	3 5		
	B	10	0			_																		35		
20	A	10	0				6.7	3.8				8.2	8.0				25	25				25-	25	25		
	B	10	0			-										_	-		ļ		┼	-	-	25		-
												-														
											k		7													
Ascerd	ed By:	10	BAY	MW			Ans	BM	NW			KS	BAM	My			13	Bfu	MM			A	BAN	M		

[•] mg/L as CaCO,

BIOLOGICAL MONITORING, INC. Toxicity Test Procedure Check Sheet.

Test I.D.#:	91301-2		y Test Procedure Check Test Containers Used	(*)	Pageof entration:
		effluent measured out per co			
Concentration %mg/D other	Diluent(mLs)	Effluent(mLs)		Are all test chambers properly labeled?	405
0	1000	. J	1 /000	Specify vessel type and volume used to	measure and deliver effluent and
1.25	987.5.	12.5	1000	diluent to test chambers:	~
2.5	975	25	1//////	Graduated cylinder(s) 2000100	
10-5	950	50	1000	100 \$ 50 \(\sqrt{25} \) 10	and the second s
210	900	100	1000	Volumetric flask(s) 1000500_	
20	80v	Zoo	1 (1)	Pipet(s) 1051	
				otal Chlorine of sample upon arrival (motal Chlorine of sample after dechlorina	
Exposure Chamber Total Vessel Capacity Test Solution Volume Water Depth Constan	y: <u>Stort</u> Pro e: <u>350 ml</u> No ut: <u>r</u> Fo	eding Schedule stest Feeding: x fed: d Daily:	Aeration Pretest: None: Slow: (bubbles/min)	Not Used:	Mm.
Cyclic:	Fo.	d irregularly (describe)	Moderate: Vigorous:	16h/8h:	
	Ty	pe of Food:	Beginning: (hour)	The state of the s	
Conditions of survivi	ng organisms at end o	of test: Kirm I			
Methods of Randomi	zation employed:	Random #			
Comments:					
					f)

C:\My Documenta\Admin Asst\SOP Figures 98\Figure 31B - Tox Test Procedure

BIOLOGICAL MONITORING, INC. SUMMARY OF TEST STOCK SOLUTION PREPARATION

Client: SML	
Test ID Nos. 7091301-1-2	
at .	
STOCK A - MAST	ER STOCK SOLUTION
ID#:- RT0913U1-	2097
Compound Type: Sodiu	· Laury Sulfata
Weight of Compound: 0. 100	ه ما ما
Diluent Type: Syn Sea	Later 09/2090 09/101
	In voc
Final Concentration: \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\ \\	n^
Prepared By: A Smith	
Date/Time: 9/B/dl	1215
, ,	
Substock A - ID #	Substock A - ID #
Volume of Stock A:	Volume of Stock A:
Diluent Type:	Diluent Type:
Volume of Diluent:	Volume of Diluent:
Final Concentration:	Final Concentration:
Prepared By:	PreparedBy:
Date/Time:	Date/Time:
*	8
Substock A - ID #	Substock A - ID #
Volume of Stock A:	Volume of Stock A:
Diluent Type:	Diluentlype:
Volume of Diluent:	Volume of Diluent:
Final Concentration:	Final Concentration:
Prepared By:	Prepared By:
Date/Time:	

SPEARMAN-KARBER

TRIM: .00% LC50: 1.830 95% LOWER CONFIDENCE: 1.711 95% UPPER CONFIDENCE: 1.958

				D T1101 (T2 T
CONC.	NUMBER	NUMBER	PERCENT	BINOMIAL
mqq	EXPOSED	DEAD	DEAD	PROB.(%)
1.25	20.	0.	.00	.9537D-04
2.50	20.	19.	95.00	.2003D-02
5.00	20.	20.	100.00	.9537D-04
10.00	20.	20.	100.00	.9537D-04
20.00	20.	20.	100.00	.9537D-04

THE BINOMIAL TEST SHOWS THAT 1.25 AND 2.50 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.9979 PERCENT.

AN APPROXIMATE LC50 FOR THIS DATA SET IS 1.850

WHEN THERE ARE LESS THAN TWO CONCENTRATIONS AT WHICH THE PERCENT DEAD IS BETWEEN 0 AND 100, NEITHER THE MOVING AVERAGE NOR THE PROBIT METHOD CAN GIVE ANY STATISCALLY SOUND RESULTS.

DATE: 9/13/01

TEST NUMBER: RT-1

DURATION: 48 hours

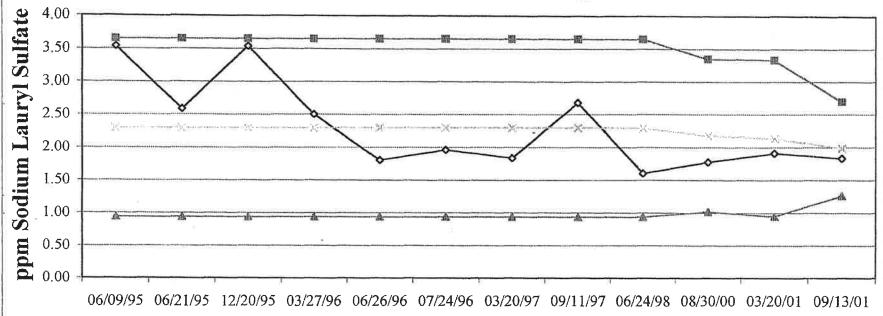
SAMPLE: sls SPECIES: C. variegatus

METHOD	LC50	COL	NFIDENCE LI	IMITS
		LOWER	UPPER	SPAN
BINOMIAL	1.850	1.250	2.500	1.250
MAA	*****	*****	*****	*****
PROBIT	*****	*****	*****	*****
SPEARMAN	1.830	1.711	1.958	.247

**** = LIMIT DOES NOT EXIST

BMI Reference Toxicant Chart

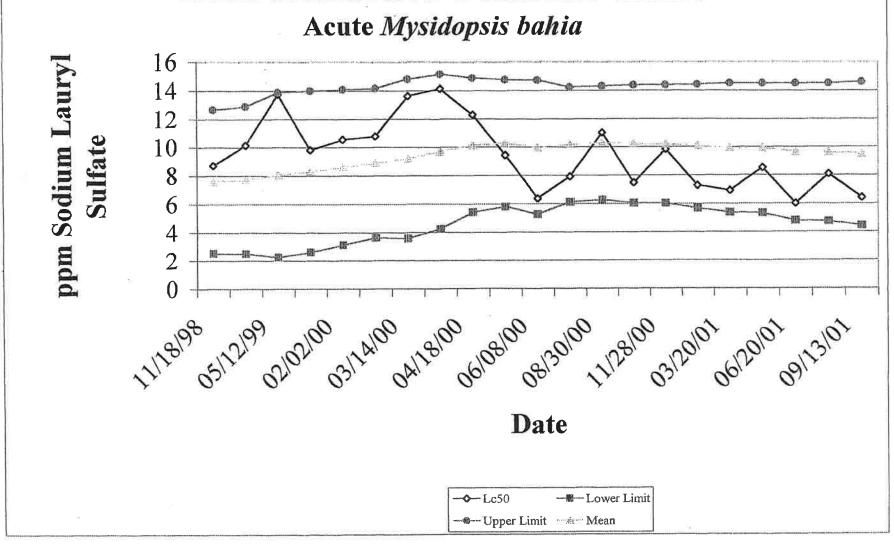
Acute Cypinodon variegatus



Date

→ LC50 — UPPER LIMIT — LOWER LIMIT — MEAN

BMI Reference Toxicant Chart



Omega Protein--Reedville Sampling Results for **CYANIDE**

1	ng Res Om	ega Efflu	ent	Cockre	II Creek End of	Between	
	Outfall	Outfall	Outfall	at Intake of 001	Mainstreet Reedville	Omega & Ampro	Type of Sample
Date	001 (future)	004/005	002	- 001			water
10/18/01	<.01	<.01	<.01				water
11/15/01	0.042*						water
12/4/01	1.762*			0.02			water
5/9/02				<.01	<.01	<.01	water
8/12/02				0.1			SLUDGE
8/13/02				0.1			water
8/15/02	0.03				+		water
8/15/02	0.09				0.01	0.03	water
8/19/02	-						water
8/20/02	0.12				-		water
8/21/02	0.17		<.01				water
8/22/02	<.01	V -			-		water
8/22/02	<.01		<.01_		0.02	0.03	water
8/26/02	-				0.44	0.79	water
9/3/02	1						water
9/4/02	2.99						water
9/5/02	2.05						water
9/5/02	0.48	=======================================			_		water
9/6/02	0.14		NA -		<.01	<.01	water
							water
9/9/02 9/10/02	<.01			_			water
9/10/02					_		water
					_		water
9/13/02					<.005	<.005	water
9/13/02					1,000		water
9/16/02							water
9/17/02							water
9/19/02					0.009	0.043	water
9/19/03					0.00		water
9/22/02							water
9/24/0:						_	water
9/25/0							water
9/26/0					<.00	5 0.04	2 water
9/27/0						5 - 5.5	water
9/30/0		-			_	_	wate
10/1/0					_	-	wate
10/2/0							
10/3/0	0.170						
		_					

¹⁾ The Monday sampling of Creek media is performed in an effort to remove any influence of the discharge from Omega's processing. Omega usually completes processing for the week on Saturdays. Thus, by Monday, the Creek would have had two days to flush itself out by tidal action

²⁾ The sample taken on Tuesday September 3 was the day after Labor Day (Omega did not fish on Labor Day)--there likely was a lot of boat traffic on Cockrell Creek on Labor Day that might have agitated bottom sludges.

³⁾ The sampling of 5/9/02 was before fishing had started for 2002

⁴⁾ Data from the 001 and 004/005 samples taken in 2001 (indicated by an *) are questionable

⁵⁾ Starting with the 9/13/02 sample, the Detection Limit was lowered to 0.005. According to the lab, it is not possible for lower Detection Limits.

TOXICITY TESTS FOR OMEGA PROTEIN

Submitted to:

Mr. Lyell Jett Omega Protein P.O. Box 175 Reedville, VA 22539

Prepared by:

Biological Monitoring, Inc. 1800 Kraft Drive, Suite 101 Blacksburg, VA 24060

Phone: 540-953-2821 Fax: 540-951-1481 www.biomon.com

November 27, 2001

The following data have been internally reviewed and the personnel meticulously followed the methods. The procedures are deemed to be compliant with the methods and acceptable for reporting

Anthony Smith (Laboratory Manager)

BIOLOGICAL MONITORING, INC. Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Anthony Smith

NPDES Permit #: VA0003867

Experiment ID#: OMP111401-2

Test Organism: Mysidopsis bahia

Test Type: Static Acute

Organism Age at Start of Test: 3 d

Sample Tested: Outfall 002

Sample Type: Composite

Sample Collection Frequency and Dates and Times: From 11/12/01 @ 0700 to 11/13/01 @ 0700

Sample Collector: J.R. Hall

Delivered by: UPS

No. of Organisms per Replicate: 5

Feeding Regime: 2x daily

Test Volume: 450 mL

Test Duration: 48 h

Time: 1620

Time: 1532

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 111301

Test Temperature: 25 ± 1 °C

No. of Replicates per conc.: 4

Feeding prior to test: Normal

Chamber Size: 800 mL PP

Photo Period: 16h light/8h dark

Start of Test: Date: 11/14/01

End of Test: Date: 11/16/01

Equipment:

pH Meter: SA 720 (A) DO Meter: YSI 58 (b)

SCT Meter: YSI 33 (A)

°C Measurement: Calibrated Thermometer

Salinity: SCT Meter

Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

BIOLOGICAL MONITORING, INC. Acute Toxicity Test Data Summary

Client	Omega Protein	NPDES PERMIT #: VA000386					
Test Organism	Mysidopsis bahia		Date	Time			
Experiment ID	OMP111401-2	Start Test	11/14/01	1620			
Sample Tested	Outfall 002	End Test	11/16/01	1532			

RESULTS

Water Chemistry Analyses (Range)									
Conc.	Temp. (°C)	D.O. (mg/L)	Ħq	Salinity (ppt)	Survival (%) 48 h				
D 100	25 25	5.2-6.9 6.2-7.7	7.8-8.3 7.8-7.9	19-20 18	95 95				

STATISTICAL ANALYSES

Test Method	LC50 (%)	95% Fiducial (Confidence) Limits							
N/A	N/A	N/A							
OMMENTS: No LC:	50 generated due to lack of	f mortality. NOAEC = 100%.							

		: **												ST						_		1		8ge	_ of _	
erimen	t I.D. A	:_ <i>C</i>	PMF	1112	401.	1		NPO	DES P	ermit 🌡	v: (//	600 P	386)		Proj	ect Sc	ientist	٠	Ben	ku.	. A.	Ual	in		
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rent/Sa	mple	DUTT	ALL	00	2							Test	Organ	nism; S	pecie	s:	1. bo	hia		org	. Batch	#_A	B\$41	130		
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ple Ty																			fes	(6)	Batch	#:	1/12	501		
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posite	From	: Date	-14	106	_Tim	e:^	7:00	—, T	o: Dat	e: <u>11</u>	<u> Loi</u>	_ Tim	e: <u> </u>	1:00	Start	t of T	est: D	ate:	1114	101		Ti		1620		-
Mode	:	W.	z Ac	wte	Test	Dura	tion:_	_4	Thrs.	•		0			End	of Te	st: C)ate:	1116	01		Т	ime:	153	<u>2</u>	
Conc or %	Test Cent	Number of Live Organisms					Dissolved Oxygen (mg/L)				рН					Sa	Salinity 0/00				Temperature (°C)					
		0	24	48	72	14	٥	24	41	72	94	0	24	48	72	26	l.o.	34	48	72	16	0	24	48	72	
0	A	5	+	4			6.9	6.0	5.2			8,3	81	78			230	250	20			25	25	25		
	3	5	5	5			i II										19	19	20							
	5	5	5	5																						_
	D	5	5	5		_		-									RAN	211	211		-					_
100		5	5	5	_	-	7.7	6.2	6.2			7.9	7.9	7.8				240			-	25	25	32		-
-	B	5	5	5	_	-		-								-	18	18	18		-	-	-			╁
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Bacara	ed By:	RAA.	34m	BM			24	弘	PM			34	RM	BM			Ben	Bpu	RAV	_	1	BM	BM.	BM		\vdash

BIOLOGICAL MONITORING, INC. Toxicity Test Procedure Check Sheet

		Toxicit	y Test Procedure Check	k Sheet Page_of_									
Test I.D.#: <u>OM</u>	P111401-2	Permit #VIAdo38	Test Containers Used	l: P. = # of replicates/concentration: 4									
Specify below volu	me of diluent and eff	luent measured out per con	acentration in this test:	*									
Concentration % mg/L other	Diluent(mLs)	Effluent(mLs)	Total(mLs)	Are all test chambers properly labeled?									
	3300	0	3300	Specify vessel type and volume used to measure and deliver effluent and									
100	0.	3300	3300	diluent to test chambers:									
				Graduated cylinder(s) 2000 500 250									
				100502510									
				Volumetric flask(s) 1000 500 200 100									
				Pipet(s) 1051Other									
		<u> </u>		Specify material (s) used to place test organisms into test									
				chambers: Widebore pipet									
			- L										
				otal Chlorine of sample upon arrival (mg/L) CO (mg/L)									
Exposure Chamber Total Vessel Capacity Test Solution Volume	: 450 ml Prote	ing Schedule st Feeding:ed:	Aeration Pretest: None:	Screened Animal Enclosures Not Used: Used: Organism pretest treatment									
Water Depth Constan		Daily: 2X	Slow:(bubbles/min)										
Cyclic:_	Fed u	rregularly (describe)	Moderate:	16h/8h:									
	Tune	of Food:	_ Vigorous:	other:									
Conditions of survivir	ng organisms at end of		Beginning:(hour)	a a									
	ration employed:												
Comments:													

C:\My Documents\Admin Asst\SOP Figures '98\Figure 31B - Tox Test Procedure

10899

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collect	ing the sample. See reverse side for instructions.
1. Client name Mega Protein	5. Purchase order no
2. Sampler's name J. P. Hall	6. Affiliation
3. Sample source Lagoon out fell	7. NPDES permit no./County
4. Outfall/station OO2	8. Test period for which data is being submitted:
9. Sample relinquished by: J.R. Hall 11/1	3 O Date; Received by: Dentru A. Mockey / 11140 Date,
Sample relinquished by:/_	Date;Received by:Date.
Description of Samp	pling Methods and Equipment
10. Type of sample collected:	Composite
Grab	Composite type
Date collected	Collection period: from //-/2-01 (date)
Time collected	
Volume	
14. Flow during sampling 30,300	14. No. of subsamples
12. Type of container 1- gal. plastic	15. Frequency
13. Number of containers shipped	16. Volume
13. Number of containers shipped	10. Volume
	9):
One-distance FEE	want of Time of Callegation
Condition of Em	uent at Time of Collection
0	
17. pH_2.40 18. Chlorine	20. Is the sample:
19. Temperature:	Chlorinated
At collection point	Dechlorinated
In collection device (comp. sample must be @	or below 4°C) 4°C Unknown Unknown
	Dechlorination method
Shipp	ing Information
8 2	
21. Method of shipment UPS 22. Date s	shipped //-/3-0/ 23. Time 2:30 p.M
24. Was the sample packed with ice for shipment?	
25. Custody seal in place by J. R. Hall	D-4- 1/ 1/2 m21 TT 12-12-12
25. Custody seal in place by 1. 10 tale vi	Date -13-01 Time 1:00 pm
Instr	uctions to Lab
20. Tour of social so he performed	
26. Type of test(s) to be performed	
27. Should BMI dechlorinate the sample (Yes or No)_	28. Should ammonia be measured? (Yes or No)
29. Comments	
99	0.4
30. I certify that the above information is	correct
	/ Signature Date
******	*************************
Alk For I	BMI Use Only
Hard) 17
BMI Sample ID# OMP 111401-1 Received by 1	Description Date 111401 Time 1200
	emperature 390 pH 8 Chlorine Local LL DO (1.6
On ice?	Salinity Bloot Conductivity Arrow
Visual description Class Odos less	Sample refrigerated
Test ID number(s) OMP 111401 - 1	

Project Manager: A Santa	Date: 11/14/01
Assigned to:	Test Start Date: ///////
Client: Omeça Profein	Client's P.O.#:
Test ID#: 0MP 1 [1901 - 1	BMI Project#: 320/
Test Description: SAML	Test Prefix: OMV
Test Conditions (Circle Approriate Choice)	
Acute/Chronic	
Organism: P.p., D.p., D.m., C.d., M.b., C.v., H.a., Ct Other:	Toxicant: OO 2 Permit No.#:
Duration: 24h, 48h, 96h, 7d, 10d, Renew at: 24h, 48h, 96h, daily, none,	Test Vol: 450 int Chamber: 800 int
Concentrations: [0, 6.25, 12.5, 25, 50, 100%] Other) O , 100	IWC:
Replicates: 1, 2, 3, 4, 8, 10 Diluent: MHRW, Surface Syn Sewith	Other:
Temperature: $12 \pm 1^{\circ}$ C, $20 \pm 1^{\circ}$ C, $23 \pm 1^{\circ}$ C, $25 \pm 1^{\circ}$ C Test Salinity: Freshwater, 13 ppt, 20 ppt	
Feeding: 1x daily 2x daily) 3 x daily, none, as specified_	
Dechlorination Sample: Yes/No (Circle One) pH Adjustment to be done: Yes/No	
Extra Controls:	
Special Conditions:	
Comments: Ray fulle on &	ell
	8

BIOLOGICAL MONITORING, INC. Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Anthony Smith

NPDES Permit #: N/A

Experiment ID#: RT111401-1

Test Organism: Mysidopsis bahia

Test Type: Static Acute Reference Toxicant

Organism Age at Start of Test: 3 d

Sample Tested: Sodium Lauryl Sulfate

Sample Type: Product

Sample Preparation Dates and Times: 11/14/01 @ 1400

Sample Prepared by: B. Machingo

Delivered by: N/A

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 111301

Test Temperature: 25 ± 1 °C

No. of Replicates per conc.: 2

No. of Organisms per Replicate: 10

Feeding prior to test: Normal

Chamber Size: 800 mL PP

Test Volume: 450 mL

Feeding Regime: 2x daily

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 11/14/01

Time: 1450

End of Test: Date: 11/16/01

Time: 1422

Equipment:

pH Meter: SA 720 (A) DO Meter: YSI 58 (b) SCT Meter: YSI 33 (A)

°C Measurement: Calibrated Thermometer

Salinity: SCT Meter

Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

BIOLOGICAL MONITORING, INC. Acute Toxicity Test Data Summary

Client	Omega Protein	NPDES PERMIT #: N/A							
Test Organism	Mysidopsis bahia		Date	Time					
Experiment ID	RT111401-1	Start Test	11/14/01	1450					
Sample Tested	Sodium Lauryl Sulfate	End Test	11/16/01	1422					

RESULTS

			istry Analyses nge)		
Cona.	Temp.	D.O. (mg/L)	рН	Salinity (ppt)	Survival (%) 48 h
0 1.25 2.5 5 10 20	25 25 25 25 25 25 25	5.5-6.9 5.8-6.9 5.4-6.9 5.2-6.9 5.0-6.9 4.8-7.0	7.8-8.3 7.9-8.3 7.9-8.3 7.8-8.3 7.8-8.3 8.0-8.3	19 20 20 19-20 19-20 20	95 85 100 50 20

STATISTICAL ANALYSES

Test Method	LC50 (ppm)	95% Fiducial (Confidence) Limits				
Trimmed Spearman- Karber	5.432	4.306-6.852				

														ST					Ges			0.00		age		
eriment	1.D.	: - ·	KI	-11	1140) -	l	NPI	DES P	ermit #	Y:		VA	8		Proi	ect Sc	ientist	(Ber	wan	A./	Moc	liero		
nt:	BM	L										00.0	officer	· NO	re n	MARCO	ASO	14		/	}		1 6	/)		
ent/Sa	mple:	OUTHA										Test	Ornar	niem: S	necie	. N	1 h.			Jane	Batch	1 N				
ple Co	ntaine	r:(Glo	25	/Pz	ne	×					Num	ber of	Organ	isms	per Co	oncenti	ation:		20	_	3	A	ge: <u>3</u>	'al	
ple Ty	pe; Da	te and	Tim	e of C	Collec	tion:	Co	no	our	d		Dilut	ion W	ater Us	ي :ed	Dyra-	Dean	Del	11130	(Batch	· #:		1301		
;Gr	ab: D	ate:				7	lime:_	\perp						erature												
posite:	From	: Date	:		_Tim	e:		T	o: Dat	e:		_ Tim	e:		Stan	t of To	est: D	ate:	1114	101		Т	ime:	145	<u> </u>	_
Mode	:_5/	till	Ac	rte	Test	Dura	tion:_	4	8 hc	5		-5			End	of Te	st: D	ate:_	1116	01		T	ime:_	142	2	
Cone or %	Tet Number of Live Dissolved Oxygen							рН			Sa	linity	0/00			٦	ſempe	rature	(°C)							
		0	24	48	72	14	•	24	48	72	96	0	24	48	72	14	2 M	24 2AM	ملاء	72	16	0	24	48	72	94
0	A	ic	10	a			6.9	6.0	5.5			8.3	8-1	7.8			250	250	250			25	25	25		_
	Ď	10	10	10													19	19	19			ļ.,				
1-25		10	io				6.9	5.8	5.8		_	8.3	8.1	7.9	- 1		260	266	500		-	25	ಎಽ	as		-
	3	10	_	8			 	<u> </u>				_					20	20	20		-	-				-
2.5	4	10		10	-		6.9	5.4	60			8.3	8.0	7.9		-	260	266	260	-	-	25	25	25	-	-
10	D	10	10	10			6.0	£ 2	- 3			1 2	-	A		-	300	20	100) 1817		+-	-		٥٣	-	1
5.0	3	10	4	17		-	6.7	12.0	5.2		-	8.5	8.0	7.9			200	20	100	-	+-	25	25	ريدا	-	\vdash
10	A	10	3	3	-		1. 9	50	5.0			0 2	P 0	78				100		-	+-	20	25	2 <		
10	3	10	1	1			0.1	ال.	13.0			0.5	0.0	7.5			-	20	1	 	\vdash	163	راء	رو		
20	A	10	0	-			70	4.8	1-			93	8.0	_			50	3/0	-			75	25	-		
	3	10		_			1.0	1 10					11.0		- Y		-	20	_			1		1000		
																						-	ļ			
		-		-	-	-	-	-		-		-						_		-	+-					-
				-			-	-	-		 		-				-				+	-	-			
Aucord	ed By:	BAM	BAM	34	1		134	BM	BAM	-		BAN	BM	147			BA	151	BA	1		BM	M	BM	1	

[•] mg/L as CaCO,

BIOLOGICAL MONITORING, INC.

		Toxicity 1	Fest Procedure Check	Sheet	Pageof
Test I.D.#:	111401-1	Permit #	Test Containers Used:	# of replicates/con	centration:2
Specify below vol	ume of diluent and eff	fluent measured out per conce	entration in this test:	*	
Concentration % mg/L other	Diluent(mLs)	Effluent(mLs)		Are all test chambers properly labeled	
0	1000	0	100011	Specify vessel type and volume used t	o measure and deliver effluent and
1.25	987.5	125	1000	diluent to test chambers:	
2.5	975	25	(ASSESS)	/ ' -/	00250
3.0	950	50	1000	100502510	
10	900	100		Volumetric flask(s) 1000500_	
20	800	200	1000	Pipet(s) 1051	
			1	Specify material (s) used to place test	organisms into test
				chambers: Wide Done	Tuper
				otal Chlorine of sample upon arrival (notal Chlorine of sample after dechlorin	. 11 /
Exposure Chamber		ding Schedule	Aeration	Screened Animal Enclosures	Organism pretest treatment
Total Vessel Capacit Test Solution Volum		est Feeding: fed:	Pretest:None:	Not Used:Used:	Normal
Water Depth Constan	nt: yes Fed	Daily:	Slow:(bubbles/min)	Photoperiod:	
Cyclic	Fed	irregularly (describe)	Moderate:	16h/8h:	
	77	. CP. J	Vigorous:	other:	
Conditions of surviv	ing organisms at end of	e of Food:	Beginning: (hour)		*
	8	Rouglow #			
Comments:					

C:\My Documents\Admin Asst\SOP Figures '98\Figure 31B - Tox Test Procedure

BIOLOGICAL MONITORING, INC. SUMMARY OF TEST STOCK SOLUTION PREPARATION

BMI							
Client: Owan Potas							
Test ID Nos. 0 111401-1							
STOCK A - MAST	er stock solution						
D#: 01711401	- 3023						
	Javrel Sulfote						
Weight of Compound:	1						
Diluent Type: Synchro	e Sedente						
Volume of Diluent (units):	coul						
Final Concentration: 100	m //						
Prepared By: Saupin	D. Moching						
Date/Time: 11140	1400						
8							
Substock A - ID #	Substock A - ID #						
Volume of Stock A:	Volume of Stock A:						
Diluent Type:	Diluent Type:						
Volume of Diluent:	Volume of Diluent:						
Final Concentration:	Final Concentration;						
Prepared By:							
Date/Time:	Date/Time:						
250							
Substock A - ID #	Substock A - ID #						
Volume of Stock A:	Volume of Stock A:						
Diluent Type:	DiluentType:						
Volume of Diluent:	Volume of Diluent:						
Final Concentration:	Final Concentration:						
Prepared By:	Prepared By:						
Date/Time:	Date/Time:						

SPEARMAN-KARBER

TRIM: 7.50% LC50: 5.432 95% LOWER CONFIDENCE: 4.306 95% UPPER CONFIDENCE: 6.852

194	CONC. ppb- pr 1.25 2.50 5.00 10.00	NUMBER EXPOSED 20. 20. 20.	NUMBER DEAD 3. 0. 10.	PERCENT DEAD 15.00 .00 50.00 80.00	BINOMIAL PROB.(%) .1288D+00 .9537D-04 .5881D+02 .5909D+00
	10.00 20.00	20. 20.	16. 20.	80.00 100.00	.9537D-04

THE BINOMIAL TEST SHOWS THAT 2.50 AND 10.00 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.4090 PERCENT.

AN APPROXIMATE LC50 FOR THIS DATA SET IS 5.000

RESULTS USING MOVING AVERAGE

SPÆN G LC50 95% CONFIDENCE LIMIT 4 .086 5.77 4.40 7.79

****** RESULTS CALCULATED BY PROBIT METHOD
ITERATIONS G H GOODNESS OF FIT
6 1.061 4.02 .01

SINCE THE PROBABILITY IS LESS THAN 0.05, RESULTS CALCULATED USING THE PROBIT METHOD PROBABLY SHOULD NOT BE USED.

SLOPE = 2.91

95% CONFIDENCE LIMITS: -.09 AND 5.91

LC5O= 5.03

95% CONFIDENCE LIMITS: 0 AND + INFINITY

 $T_{c1} = .80$

95% CONFIDENCE LIMITS: 0 AND 2.41

DATE: 11/14/01 TEST NUMBER: RT-1 DURATION: 48 hours

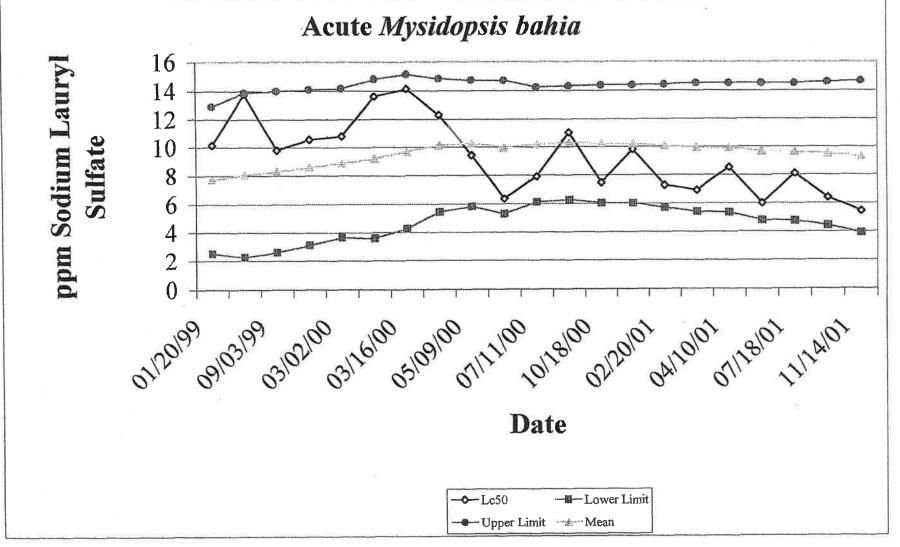
SAMPLE: SLS SPECIES: M. bahia

CONFIDENCE LIMITS METHOD LC50 LOWER UPPER SPAN 2.500 7.500 3.391 BINOMIAL 5.000 10.000 5.773 7.788 4.397 MAA 5.032 ****** ***** PROBIT 2.546 6.852 SPEARMAN 5.432 4.306

NOTE: MORTALITY PROPORTIONS WERE NOT MONOTONICALLY INCREASING.
ADJUSTMENTS WERE MADE PRIOR TO SPEARMAN-KARBER ESTIMATION.

**** = LIMIT DOES NOT EXIST

BMI Reference Toxicant Chart





Graham Lyell Jett General Manager

January 18, 2002

Ms. Denise Mosca
Department of Environmental Quality
P.O. Box 669
429 East Church Street
Kilmarnock, VA 22482

Re: Final Quarterly Status Report

Dear Denise:

Based upon test results, we expect outfall compliance for Outfall 006 (a combination of prior outfalls 001, 004 and 005) to be resolved by separating outfall 006 into two new outfalls. Since the VPDES permit renewal application was due in June 2002, it was decided to submit the application sufficiently early to provide for a new permit for the start of the 2002 fishing season in late May. The new permit will address the new outfalls 001 and 006 and provide for a diffuser for Outfall 001. Thus, we expect to be in full compliance.

Sincerely yours,

Lyell Jett General Manager

GLJ:sdh

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO.:

602

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL(5)	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY(3)	SPECIFIC TARGET VALUE
	W			METALS				
	24	Antimony (Dis.)	(5)	(5)	BDL	G	1/5 YR	129000 a outfalls
		Arsenic III (Dis.)	(5)	(5)	ВОС	G	1/5 YR	[001,003 004,005 006: 55.2 [002: 634
440	01025	Cadmium (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003 004,005 006: 34. [002: 27
023	01032	Chromium VI	(5)	(5)		G	1/5 YR	[001,003 004,005 006: 886 [002: 150
442	01040	Copper (Dis.)	(5)	(5)	BDL .008 ng/2	G	1/5 YR	[001,00 004,00 006: 2.3 [002: 26.
405	01049	Lead (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,00 004,00 006: 17 [002: 25
444	71890	Mercury (Dis.)	(5)	(5)	BIL	G	1/5 YR	[001,00 004,00 006: 1. [003: 1.
445	01065	Nickel (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,00 004,00 006: 6 [002: 2
446	01145	Selenium (Dis.)	(5)	(5)	BUL	G	1/5 YR	[001,00 004,00 006: 24 [002: 21
447	01075	Silver (Dis.)	(5)	(5)	Bioc	G	1/5 YR	[001,00 004,00 006: 1. [002: 21
448	01092	Zinc (Dis.)	(5)	(5)	BAL	G	1/5 YR	[001,0 004,0 006: 7

Hadridge (Nist

. 003 may /2

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO.:

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE ^{(4) ug/1}
			PEST	CIDES/PC	B'S	ži .		
332	39330	Aldrin	608	0.05	BDL	3G	1/5 YR	NA
333	39350	Chlordane	608	0.2	BDL	3G	1/5 YR	NA
334	77969	Chlorpyrifos (Dursban)	622	(7)	BDL	3G	1/5 YR	NA
	77 - 21	DDD	608	0.1	BIL	3G	1/5 YR	NA
		DDE	608	0.1	BDL	3G	1/5 YR	NA
335	39370	DDT	608	0.1	BDL	3G	1/5 YR	NA
336	39560	Demeton	(6)	(7)	BDL	3G	1/5 YR	NA
337	39380	Dieldrin	608	0.1	BDL	3G	1/5 YR	NA
		Endosulfan	608	0.1	BDC	3G	1/5 YR	NA
339	39390	Endrin	608	0.1	BDL	3G	1/5 YR	NA
340	39580	Guthion	622	(7)		3G	1/5 YR	NA_
341	39410	Heptachlor	608	0.05	BDL	3G	1/5 YR	NA NA
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05		3G	1/5 YR	NA
		Kepone	(6)	(7)	BDL	3G	1/5 YR	NA
343	39530	Malathion	(6)	(7)	BDL	3G	1/5 YR	NA NA
344	39480	Methoxychlor	(6)	(7)	BDL	3G	1/5 YR	NA
345	39755	Mirex	(6)	(7)	BOL	3G	1/5 YR	NA
641		PCB-1242	608	1.0	BDL	3G	1/5 YR	NA
642		PCB-1254	608	1.0	BDL	3G	1/5 YR	NA
643		PCB-1221	608	1.0	BDL	3G	1/5 YR	NA
644		PCB-1232	608	1.0	RDL	3G	1/5 YR	NA
645		PCB-1248	608	1.0	BDL	3G	1/5 YR	NA
618	39508	PCB-1260	608	1.0	BUL	3G -	1/5 YR	NA
646		PCB-1016	608	1.0	BOL	3G	1/5 YR	NA

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO.: OCL

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE(4)100
349	39400	Toxaphene	608	5.0	BOL	3G	1/5 YR	NA
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	BIDL	3G	1/5 YR (PWS)	NA
		**************************************	NEUTF	RAL EXTR	ACTAE	LES		
		Acenaphthene	625	10.0	BDL	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	PDL	3G	1/5 YR	NA
276	34526	Benzo(a)anthracene	625	10.0	BDL	3G	1/5 YR	NA
648	01020	Benzo(b)fluoranthene	625	10.0	BDI	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0	BDL	3G	1/5 YR	NA
	34247	Benzo(a)pyrene	625	10.0	BDL	3G	1/5 YR	NA
277	34241	Butyl benzyl phthalate	625	10.0	BDL	3G	1/5 YR	NA
000	34320	Chrysene	625	10.0	BUL	3G	1/5 YR	NA
282	34320	Dibenz(a,h)anthracene	625	20.0	RUL	3G	1/5 YR	NA
654		Dibutyl phthalate	625	10.0		3G	1/5 YR	NA
	04536	1,2-Dichlorobenzene	625	10.0	PDL	3G	1/5 YR	NA
259	34536	1,3-Dichlorobenzene	625	10.0	BOL	3G	1/5 YR	NA
264	34566	1,4-Dichlorobenzene	625	10.0	BUL	3G	1/5 YR	NA
266	34571	Diethyl phthalate	625	10.0	BOL	3G	1/5 YR	NA
	-	Di-2-Ethylhexyl Phthalate	625	10.0		3G	1/5 YR	NA
170	0.1014	2,4-Dinitrotoluene	625	10.0	BDL	3G	1/5 YR	NA
239	34611		625	10.0	BDL	3G	1/5 YR	NA
287	34376	Fluoranthene	625	10.0	BOL	3G	1/5 YR	NA
288	34381	Fluorene	625	20.0	BUL	3G	1/5 YR	NA
651	-	Indeno(1,2,3-cd)pyrene	625	10.0	BUL	3G	1/5 YR	NA
650	-	Isophorone		10.0	BDL	3G	1/5 YR	NA
293	34696		625	10.0	BAL	3G .	1/5 YR	NA
296	34469	Pyrene	625	10.0	BOL	. 3G	1/5 YR	NA.

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO.: OCT

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE
			V	DLATILES			AND A STATE OF	STRUCTURE CHE
216	34030	Benzene	624	10.0	BDL	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	BDL	G	1/5 YR	NA
236	32102	Carbon Tetrachloride	624	10.0	BDC	G	1/5 YR	NA NA
652		Chlorodibromomethane	624	10.0		G	1/5 YR	NA
223	32106	Chloroform	624	10.0	BUL	G	1/5 YR	NA
649		Dichloromethane	624	20.0	······	G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0		G	1/5 YR	NA.
260	34531	1,2-Dichloroethane	624	10.0	BOL	G	1/5 YR	NA
		1,1-Dichloroethylene	624	10.0		9. G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	BUL	G	1/5 YR	NA
653		Monochlorobenzene	624	50.0		G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0		G	1/5 YR	NA
222	34010	Toluene	624	10.0	BDL	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0		G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	BDL	G	1/5 YR	□ NA
		A	CIDS E	XTRACT	ABLES			9
		2-Chlorophenol	625	10.0	BOL	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	BDL	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0	BOL	3G	1/5 YR	NA
210	39032	Pentachlorophenol	625	50.0		3G	1/5 YR	NA
175	46000	Phenol ⁽⁸⁾	625	10.0		3G	1/5 YR	NA
602	34621	2,4,6-Trichlorophenol	625	10.0		3G	1/5 YR	NA
			MISC	ELLANE	ous	241		
039	00610	Ammonia as NH3-N	350.1	200	48,3 mg/s	С	1/5 YR	NA
005	50060	Chlorine, Total Residual	(6)	100		G	1/5 YR	NA
018	00720	Cyanide	335.2	10.0	<u> </u>	G	1/5 YR	NA NA

FACILITY NAME:

Omega Protein

5.5

ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO.:

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY(3)	SPECIFIC TARGET VALUE ^{(4) ug}
		Fecal Coliform N/CML)	(6)	(7)	Sec jerant	G	1/5 YR	NA
137	00900	Hardness (as mg/l CaCO ₃)	(6)	(7)	16 .ng/£	С	1/5 YR	NA
		Hydrogen Sulfide	(6)	(7)	BNL	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	19.1 mg/2	С	1/5 YR	NA
350	30340	Tributlytin ⁽⁹⁾	NSB 85-3295	(7)	BDL	С	1/5 YR if believed present by permittee	NA
252	81551	Xylenes (total)	SW 846 Method 8020	(7)	BDL	G	1/5 YR	NA

Graham Lyell Jett	General Manager
Name of Principal Exec. Officer or Authorized Agent /	Title
Halvin Liell Jut	2/5/02.
Signature of Principal Officer or Authorized Agent /	Date /

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO.: (C6

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE ^{(4) up}
			ľ	METALS				
		Antimony (Dis.)	(5)	(5)	BDL	G	1/5 YR	129000 a outfalls
		Arsenic III (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003 004,005, 006: 55.2 [002: 634.
440	01025	Cadmium (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,003 004,005 006: 34.4 [002: 279
023	01032	Chromium VI	(5)	(5)	BAL	G	1/5 YR	[001,003 004,005 006: 880 [002: 150
442	01040	Copper (Dis.)	(5)	(5)	.117 mg/2	G	1/5 YR	[001,003 004,005 006: 2.3 [002: 26.6
405	01049	Lead (Dis.)	(5)	(5)	BNL	G	1/5 YR	[001,003 004,005 006: 176 [002: 25
444	71890	Mercury (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,00 004,005 006: 1.0 [003: 1.6
445	01065	Nickel (Dis.)	(5)	(5)	. C14 mg/L	G	1/5 YR	[001,003 004,005 006: 60 [002: 24
446	01145	Selenium (Dis.)	(5)	(5)	3Di	G	1/5 YR	[001,00 004,00 006: 24 [002: 21]
447	01075	Silver (Dis.)	(5)	(5)	, C24	G	1/5 YR	[001,00 004,00 006: 1.8 [002: 21
448	01092	Zinc (Dis.)	(5)	(5)	304	G	1/5 YR	[001,00 004,00 006: 7

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO: CCC

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE ^{(4) ug/1}
			PESTI	CIDES/PC	B'S		- M - 147	
332	39330	Aldrin	608	0.05	BDL	3G	1/5 YR	NA
333	39350	Chlordane	608	0.2	BOL	3G	1/5 YR	NA
334	77969	Chlorpyrifos (Dursban)	622	(7)	BDL	3G	1/5 YR	NA
		DDD	608	0.1	FUL	3G	1/5 YR	NA
		DDE	608	0.1	BDC	3G	1/5 YR	NA
335	39370	DDT	608	0.1	BAL	3G	1/5 YR	NA
336	39560	Demeton	(6)	(7)	BOL	3G	1/5 YR	NA
337	39380	Dieldrin	608	0.1	BDL	3G	1/5 YR	NA
		Endosulfan	608	0.1	ROL	3G	1/5 YR	NA
339	39390	Endrin	608	0.1	BUL	3G	1/5 YR	NA
340	39580	Guthion	622	(7)		3G	1/5 YR	NA
341	39410	Heptachlor	608	0.05	BUC	3G	1/5 YR	NA
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05		3G	1/5 YR	NA
		Kepone	(6)	(7)	BAL	3G	1/5 YR	NA
343	39530	Malathion	(6)	(7)	BDL	3G	1/5 YR	NA
344	39480	Methoxychlor	(6)	(7)	BUL	3G	1/5 YR	NA
345	39755	Mirex	(6)	(7)	BDC	3G	1/5 YR	NA
641		PCB-1242	608	1.0	BDL	3G	1/5 YR	NA
642		PCB-1254	608	1.0	BUC	3G	1/5 YR	NA
643		PCB-1221	608	1.0	BDL	3G	1/5 YR	NA
644		PCB-1232	608	1.0	BDL	3G	1/5 YR	NA
645		PCB-1248	608	1.0	BDC	3G	1/5 YR	NA
618	39508	PCB-1260	608	1.0	BOL	3G -	1/5 YR	NA
646		PCB-1016	608	1.0	BOL	3G	1/5 YR	NA

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO.: E.C.C.

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE ^{(4) ug/}
349	39400	Toxaphene	608	5.0	BNL	3G	1/5 YR	NA
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	BUC	3G	1/5 YR (PWS)	NA
			NEUTF	AL EXTR	ACTAE	LES		
	au a de la composition della c	Acenaphthene	625	10.0	BAL	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	BDL	3G	1/5 YR	NA
276	34526	Benzo(a)anthracene	625	10.0	BDL	3G	1/5 YR	NA
648	O IOLO	Benzo(b)fluoranthene	625	10.0	BIL	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0	BDL	3G	1/5 YR	NA NA
277	34247	Benzo(a)pyrene	625	10.0	BNL	3G	1/5 YR	NA
211	0.2.1	Butyl benzyl phthalate	625	10.0	BDL	3G	1/5 YR	NA
282	34320	Chrysene	625	10.0	BDL	3G	1/5 YR	NA
654	34020	Dibenz(a,h)anthracene	625	20.0	BDL	3G	1/5 YR	NA
034		Dibutyl phthalate	625	10.0		3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0	BNL	3G	= 1/5 YR	NA
264	34566	1,3-Dichlorobenzene	625	10.0	BAL	3G	1/5 YR	NA
266	34571	1,4-Dichlorobenzene	625	10.0	BNL	3G	1/5 YR	NA
200	040,1	Diethyl phthalate	625	10.0	BNL	3G	1/5 YR	NA
470		Di-2-Ethylhexyl Phthalate	625	10.0		3G	1/5 YR	NA
170	34611	2,4-Dinitrotoluene	625	10.0	BDC	3G	1/5 YR	NA
239	34376	Fluoranthene	625	10.0	BUL	3G	1/5 YR	NA
287	34370	Fluorene	625	10.0	RiiL	3G	1/5 YR	NA
288	34301	Indeno(1,2,3-cd)pyrene	625	20.0	BOL	3G	1/5 YR	NA
651	1	Isophorone	625	10.0	BDL	3G	1/5 YR	NA
650	34696	Naphthalene	625	10.0	BDL	3G	1/5 YR	NA
293			625	10.0	BOL	3G .	1/5 YR	NA
296	34469	1 2 4 Trichlorobenzene	625	10.0	BAL	. 3G	1/5 YR	NA

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO.:

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE(4)
			V	DLATILES				
216	34030	Benzene	624	10.0	BDL	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	BDL	G	1/5 YR	NA
236	32102	Carbon Tetrachloride	624	10.0	BDL	G	1/5 YR	NA
652		Chlorodibromomethane	624	10.0		G	1/5 YR	NA
223	32106	Chloroform	624	10.0	BDC	G	1/5 YR	NA
649		Dichloromethane	624	20.0	,	G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0		G	1/5 YR	NA
260	34531	1,2-Dichloroethane	624	10.0	BDL	G	1/5 YR	NA
		1,1-Dichloroethylene	624	10.0		G	1/5 YR	NA_
172	34371	Ethylbenzene	624	10.0	BDL_	G	1/5 YR	NA_
653		Monochlorobenzene	624	50.0		G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0		G	1/5 YR	NA
222	34010	Toluene	624	10.0	BDL.	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0		G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	BDL	G	1/5 YR	NA
		A	CIDS E	XTRACT	ABLES			77
		2-Chlorophenol	625	10.0	BDL	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	BOL	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0	BDL.	3G	1/5 YR	NA
210	39032	Pentachlorophenol	625	50.0	BOL	3G	1/5 YR	NA
175	46000	Phenol ⁽⁸⁾	625	10.0	BUL	3G	1/5 YR	NA
602	34621	2,4,6-Trichlorophenol	625	10.0	BDL	3G	1/5 YR	NA
002			MISC	ELLANE	ous			
039	00610	Ammonia as NH3-N	350.1	200	3.7 m2/2	С	1/5 YR	NA
005	50060	Chlorine, Total Residual	(6)	100	BDL	G	1/5 YR	NA
018	00720	Cyanide	335.2	10.0	BDL	G	1/5 YR	NA

FACILITY NAME:

Omega Protein

ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO.: UCL

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE ⁽⁴⁾
7.111 11		Fecal Coliform N/CML)	(6)	(7)	240 Mins	G	1/5 YR	NA
137	00900	Hardness (as mg/l CaCO₃)	(6)	(7)	5000 mg 2	С	1/5 YR	NA
		Hydrogen Sulfide	(6)	(7)	3.3 my/e	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	BDL	С	1/5 YR	NA
350	30340	Tributlytin ⁽⁹⁾	NSB 85-3295	(7)	BIDL	С	1/5 YR if believed present by permittee	NA
252	81551	Xylenes (total)	SW 846 Method 8020	(7)	BDL	G	1/5 YR	NA

Brahan Lyell Jell	General Manage.	
Name of Principal Exec. Officer or Authorized Agent /	Title	
- Julan Lucil Det	3/5/01	
Shire of Principal Officer or Authorized Agent	Date	

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel property gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO .: OCI

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE ⁽⁴⁾
				METALS				×=
	A CONTRACT OF	Antimony (Dis.)	(5)	(5)	BDL	G	1/5 YR	129000 a outfalls
		Arsenic III (Dis.)	(5)	(5)	BÙL	G	1/5 YR	[001,003 004,005 006: 55.: [002: 634
440	01025	Cadmium (Dis.)	(5)	(5)	,008; ing/L	G	1/5 YR	[001,003 004,005 006: 34. [002: 27
023	01032	Chromium VI	(5)	(5)	BIL	G	1/5 YR	[001,00 004,005 006: 88 [002: 150
442	01040	Copper (Dis.)	(5)	(5)	,088 Mg/e	G	1/5 YR	[001,00 004,00 006: 2.3 [002: 26.
405	01049	Lead (Dis.)	(5)	(5)	BbL	G	1/5 YR	[001,00 004,00 006: 17 [002: 25
444	71890	Mercury (Dis.)	(5)	(5)	BDL	G	1/5 YR	[001,00 004,00 006: 1. [003: 1.6
445	01065	Nickel (Dis.)	(5)	(5)	BOL	G	1/5 YR	[001,00 004,00 006: 6 [002: 24
446	01145	Selenium (Dis.)	(5)	(5)	BOL	G	1/5 YR	[001,00 004,00 006: 24 [002: 21
447	01075	Silver (Dis.)	(5)	(5)	.027 .ng/L	G	1/5 YR	[001,00 004,00 006: 1.8 [002: 21
448	01092	Zinc (Dis.)	(5)	(5)	BDI	G	1/5 YR	[001,00 004,00 006: 7

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO.: OC\

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE ^{(4) US}
			PEST	CIDES/PC	B'S			
332	39330	Aldrin	608	0.05	BDL	3G	1/5 YR	NA
333	39350	Chlordane	608	0.2	BDL.	3G	1/5 YR	NA
334	77969	Chlorpyrifos (Dursban)	622	(7)	BDL	3G	1/5 YR	NA
		DDD	608	0.1	BIL	3G	1/5 YR	NA
		DDE	608	0.1	BDL	3G	1/5 YR	NA
335	39370	DDT	608	0.1	BDL	3G	1/5 YR	NA
336	39560	Demeton	(6)	(7)	BDL	3G	1/5 YR	NA
337	39380	Dieldrin	608	0.1	BDL	3G	1/5 YR	NA
		Endosulfan	608	0.1	BDL	3G	1/5 YR	NA
339	39390	Endrin	608	0.1	BDL	3G	1/5 YR	NA
340	39580	Guthion	622	(7)		3G	1/5 YR	NA
341	39410	Heptachlor	608	0.05	BDL	3G	1/5 YR	NA
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05		3G	1/5 YR	NA
		Kepone	(6)	(7)	BDL	3G	1/5 YR	NA
343	39530	Malathion	(6)	(7)	BUL	3G	1/5 YR	NA
344	39480	Methoxychlor	(6)	(7)	BOL	3G	1/5 YR	NA
345	39755	Mirex	(6)	(7)	RDL	3G	1/5 YR	NA
641		PCB-1242	608	1.0	BOL	3G	1/5 YR	NA
642		PCB-1254	608	1.0	BDL	3G	1/5 YR	NA
643		PCB-1221	608	1.0	BUL	3G	1/5 YR	NA
644		PCB-1232	608	1.0	BDL	3G	1/5 YR	NA
645		PCB-1248	608	1.0	BDL	3G	1/5 YR	NA
618	39508	PCB-1260	608	1.0	BIL	3G -	1/5 YR	NA
646	03300	PCB-1016	608	1.0	BDL	3G	1/5 YR	NA

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.:

VA0003867

OUTFALL NO .: CCI

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE(4) "99
349	39400	Toxaphene	608	5.0	BDL	3G	1/5 YR	NA
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	BDL	3G	1/5 YR (PWS)	NA
, play, 1990			NEUTR	AL EXTR	ACTAB	LES		·. ·
10 × 0	and the same of th	Acenaphthene	625	10.0	BUL	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	BDL	3G	1/5 YR	NA
276	34526	Benzo(a)anthracene	625	10.0	BOL	3G	1/5 YR	NA
648	0.02.0	Benzo(b)fluoranthene	625	10.0	BDC	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0	BOL	3G	1/5 YR	NA
277	34247	Benzo(a)pyrene	625	10.0	BOL	3G	1/5 YR	NA
		Butyl benzyl phthalate	625	10.0	BDL	3G	1/5 YR	NA_
282	34320	Chrysene	625	10.0	BDL	3G	1/5 YR	NA
654	0.023	Dibenz(a,h)anthracene	625	20.0	BOL	3G	1/5 YR	NA
- 501		Dibutyl phthalate	625	10.0		3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0	BUL	3G	1/5 YR	NA
264	34566	1,3-Dichlorobenzene	625	10.0	BDL	3G	1/5 YR	NA
266	34571	1,4-Dichlorobenzene	625	10.0	BOL	3G	1/5 YR	NA
	0.01	Diethyl phthalate	625	10.0	BAL	3G	1/5 YR	NA
170		Di-2-Ethylhexyl Phthalate	625	10.0		3G	1/5 YR	NA
239	34611	2.4-Dinitrotoluene	625	10.0	BAL	3G	1/5 YR	NA
287	34376	Fluoranthene	625	10.0	BOL	3G	1/5 YR	NA
288	34381	Fluorene	625	10.0	BNL	3G	1/5 YR	NA
651	1001	Indeno(1,2,3-cd)pyrene	625	20.0	BOL	3G	1/5 YR	NA_
650		Isophorone	625	10.0	BAC	3G	1/5 YR	NA
293	34696	Naphthalene	625	10.0	Bill	3G	1/5 YR	NA
296	34469	Pyrene	625	10.0	13 D L	3G .	1/5 YR	NA
290	34403	1 2 4 Trichlorobenzene	625	10.0	BDL	3G	1/5.YR	NΔ

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.:

VA0003867

OUTFALL NO .: CC

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE ^{(4) ug/}
			V	DLATILES				W
216	34030	Benzene	624	10.0	BDL	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	BDI	G	1/5 YR	NA
236	32102	Carbon Tetrachloride	624	10.0	BDL	G	1/5 YR	NA
652		Chlorodibromomethane	624	10.0		G	1/5 YR	NA
223	32106	Chloroform	624	10.0	BDL	G	1/5 YR	NA
649		Dichloromethane	624	20.0		G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0		G	1/5 YR	NA
260	34531	1,2-Dichloroethane	624	10.0	BOL	G	1/5 YR	NA
		1,1-Dichloroethylene	624	10.0		G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	BDL	G	1/5 YR	NA
653		Monochlorobenzene	624_	50.0		G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0		G	1/5 YR	NA
222	34010	Toluene	624	10.0	BNL	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0		G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	BDL	G	1/5 YR	NA
Mas San		Α	CIDS E	XTRACT	ABLES			×
		2-Chlorophenol	625	10.0	BDL	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	BAL	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0	AUT	3G	1/5 YR	NA
210	39032	Pentachlorophenol	625	50.0	BAL	3G	1/5 YR	NA
175	46000	Phenol ⁽⁸⁾	625	10.0	BDL	3G	1/5 YR	NA
602	34621	2,4,6-Trichlorophenol	625	10.0	BBL	3G	1/5 YR	NA
			MISC	ELLANEC	ous	ii.		policina de la composición della composición del
039	00610	Ammonia as NH3-N	350.1	200	2.4 mg/6	С	1/5 YR	NA
005	50060	Chlorine, Total Residual	(6)	100		G	1/5 YR	NA
018	00720	Cyanide	335.2	10.0	BDL	G	1/5 YR	NA

FACILITY NAME:

Omega Protein

ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

...

VA0003867

OUTFALL NO.:

(6)

DEQ PAR- AM#	EPA PAR- AM#	. CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE - FRE- QUENCY(3)	SPECIFIC TARGET VALUE ^{(4) to}
A.II #]	7,	Fecal Coliform N/CML)	(6)	(7)	IECC ISE AT	G	1/5 YR	NA
137	00900	Hardness (as mg/l CaCO ₃)	(6)	(7)	5340 mg/k	С	1/5 YR	NA
-101		Hydrogen Sulfide	(6)	(7)	2.5 49/1	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	BDC	С	1/5 YR	NA
350	30340	Tributlytin ⁽⁹⁾	NSB 85-3295	(7)	BNL	С	1/5 YR if believed present by permittee	NA
2 52	81551	Xylenes (total)	SW 846 Method 8020	(7)	BUL	G	1/5 YR	NA

Graham Lyell Jett	General	Manager	
Name of Principal Exec. Officer or Authorized Agent	Title		
Hakam Lyell Det	2/5/02		J.)
Signature of Principal Officer or Authorized Agent /	Date		

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel property gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

JANUARY 7, 2003

MS. DENISE MOSCA
DEPARTMENT OF ENVIRONMENTAL QUALITY
P.O.BOX 669
429 EAST CHURCH STREET
KILMARNOCK, VA. 22482

DMR EXCURSIONS DECEMBER REPORT

DEAR DENISE:

DURING THE MONTH OF DECEMBER WE EXPERIENCED THREE EXCURSIONS THROUGH OUR 006 OUTFALL. AS WE HAVE STATED ON OUR LAST REPORTS WE WERE EXPECTING TO BE DISCHARGING THROUGH A DIFFUSER ON OUR "001" DISCHARGE AND FEEL THESE OCCURANCES WOULD NOT HAVE HAPPENED UNDER THE CONDITIONS OF THE EXPECTED NEW PERMIT.

SINCERELY.

LYELL JETT



Permit No. VA0003867 Part I Page 14 of 25

ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY EMP Compliance Report

Facility Name: Omega Protein Address: Reedville, Va.		
VPDES Permit No.: VA0003867		
Report Period: From 12/1/02 To 12/7	102	
Paint Area	COMPLIANCE / NONCOMPLIA (check as appropriate)	ANCE *
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	()	
	(
	The same of the sa	
		- 100 May 300000
*Comments on Noncompliance		* *0
Name of Principal Exec. Officer or Authorize	d Agent / Title	
I certify under penalty of law that this docume in accordance with a system designed to information submitted. Based on my inquiry directly responsible for gathering the informat true, accurate and complete. I am aware including the possibility of fine and imprison U.S.C. paragraph 1319. (Penalties under imprisonment of between 6 months and 5 years and 5 years are provided in the system.) Signature of Principal Officer or Authorized	nt and all attachments were prepare assure that qualified personnel of the person or persons who make ion, the information submitted is to that there are significant penaltic ment for knowing violations. See these statutes may include fine tears).	anage the system or those persons the best of my knowledge and belief es for submitting false information, 18 U.S.C. paragraph 1001 and 33

Permit No. VA0003867 Part I Page 14 of 25

ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY EMP Compliance Report

Facility Name: Omega Protein Address: Reedville, Va.	198	
VPDES Permit No.: VA0003867		
Report Period: From [2/8/02 To [2/4	4102	ę
Paint Area	COMPLIANCE / NONCOMPLIANCE * (check as appropriate)	
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		(e) (c)
		My 300
	1	. 1
*Comments on Noncompliance		1, 5
Name of Principal Exec. Officer or Authorize		2 Sa 22
I certify under penalty of law that this docume in accordance with a system designed to information submitted. Based on my inquir directly responsible for gathering the informatrue, accurate and complete. I am aware including the possibility of fine and imprison U.S.C. paragraph 1319. (Penalties under imprisonment of between 6 months and 5 years and 5 years and 5 years and 5 years are provided in the control of the control	y of the person or persons who manage that the information submitted is to the best that there are significant penalties for summent for knowing violations. See 18 U.S. or these statutes may include fines up to years).	e system or those persons of my knowledge and belief ibmitting false information, C. paragraph 1001 and 33

Permit No. VA0003867 Part I Page 14 of 25

ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY BMP Compliance Report

Facility Name: Omega Protein Address: Reedville, Va.	8
VPDES Permit No.: VA0003867	
Report Period: From 12/15/02 To 12/2	1102
Paint Area	COMPLIANCE / NONCOMPLIANCE * (check as appropriate)
*	
	·
*Comments on Noncompliance	
Name of Principal Exec. Officer or Authoriz	ed Agent / Title
I certify under penalty of law that this docume in accordance with a system designed to information submitted. Based on my inqui- directly responsible for gathering the informa- true, accurate and complete. I am aware	ent and all attachments were prepared under my direction or supervision assure that qualified personnel properly gather and evaluate the ry of the person or persons who manage the system or those persons ation, the information submitted is to the best of my knowledge and beliese that there are significant penalties for submitting false information unment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 or these statutes may include fines up to \$10,000 and or maximum years).

Permit No. VA0003867 Part I Page 14 of 25

ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY BMP Compliance Report

Facility Name: Omega Protein Address: Reedville, Va.

Signature of Principal Officer or Authorized Agent /

VPDES Permit No.: VA0003867	*
Report Period: From [2/2402 To 12/28	202
Treport i once.	
	180
Paint Area	COMPLIANCE / NONCOMPLIANCE * (check as appropriate)
a	
*Comments on Noncompliance	
\rightarrow 0	Vine Many
Name of Principal Exec. Officer or Authorize	d Agent / Title
I certify under penalty of law that this documer in accordance with a system designed to information submitted. Based on my inquiry directly responsible for gathering the information, accurate and complete. I am aware	at and all attachments were prepared under my direction or supervision assure that qualified personnel properly gather and evaluate the of the person or persons who manage the system or those persons on, the information submitted is to the best of my knowledge and belie that there are significant penalties for submitting false information ment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 these statutes may include fines up to \$10,000 and or maximum

Permit No. VA00C3867
Part I
Page 14 of 25

ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY BMP Compliance Report

B i	MP Compliance Report
Facility Name: Omega Protein Address: Reedville, Va.	
VPDES Permit No.: VA0003867	
Report Period: From 12/29/02 To 12/3	102
Paint Area	COMPLIANCE / NONCOMPLIANCE * (check as appropriate)
3	

was a second	
	
*Comments on Noncompliance	
Name of Principal Exec. Officer or Authorize	
in accordance with a system designed to information submitted. Based on my inquiry directly responsible for gathering the informat true, accurate and complete. I am aware	1-7-03

GILBERT W. CLIFFORD & ASSOCIATES, INC.

150 C Olds Greenwich Dr., Fredericksburg, VA 22408 (540) 898-2115

Omega Protein December, 2002

Analysia	D <u>ute</u> Collecteri	Date Received	Station	Results (mg/L)	Date/Time Analyzed	Anziyat	iselboi	Dowckist Limit(mg/L)
TAN	12/3/02	12/4/02	Ohrchurge 006 (0721)	21	12-04-02 (1500)	WLW	SW 2540-D	1
T 5 5	12/4/02	12/5/02	Discharge BUS (3740)	26.3	12-06-02 (1200)	MTM		
	12/13/02	13/14/02	Discherge 006 (0750)	31.1	12-16-02 (0930)	WIW		
	12/14/02	12/14/02	Discharge 006 (0925)	8.3	12-16-02 (0930)	MLW		
800	12/3/02	12/4/02	Discharge 006 (9721)	10.1	12-04-02 (1120)	SSC	SM 5210 B	2
800	12/4/02	12/5/02	Discharge 008 (0740)	20.4	12-05-02 (1120)	SSC		
	12/13/03	19/14/02	Discharge (XIS (075%)	8.8	12-14-02 (1440)	880		
	12/14/03	2/14/02	Diacherge 008 (0828)	10.9	12-14-02 (1440)	SSC		
	10:000	12/4/02	(Discharge 006 (0721)	<5	12-05-02 (1300)	WEW	EPA 1664	5
OH &	12/3/02	:2/5/02	Discharge (05 (1740)	<5	12-05-02 (1300)	WILVV		
Granda	12/4/02		Discharge 006 (6750)	<5	12-17-02 (0845)	WIW		
	12/13/12	12/14/62 12/14/62	Diecharge 006 (0625)	₹5	12-17-02 (0845)	WLW		
	12/14/03	TI TOP CAN	Ditchus de ago (a. e		,			
Al.	12/3/02	12/4/02	Discharge (195 (0721)	2.38	12-04-02 (1435)	WLW	EPA 350.2	0.1
Ammonia Ritrogan	12/13/02	12/14/02	Charlesope 006 (TVSC)	0.703	12-16-02 (0945)	WLW		Nession
March Black	112 1 11 2					. 5 65 5 6 1		
TKN	12/3/02	12/4/02	Discharge 009 (0721)	2.65	12/4/02	MIM		
	12/13/02	12/14/02	Dia awayo 008 (1750)	0.84	12/16/02	ANTIA		
		4.0.4400	Discharge 006 (0721)	0.016	12-04-02 (0846)	880	SM4500-	0.05
Miriton - N	12/3/02	12/4/02	Descharge (US (9757)	0.023	12-14-02 (1430)		740248	
	12/13/02	12/14/02	Description (4) 29/1	Day. C	12-14-ar (1-100)			
Numer-N	12/3/00	12/4/02	Objenenga 006 (9721)	0.10	12-06-02 (1025)		EPA 352.1	0.3
14tm pturm	12/13/02	12/14/02	Exactorge (KIS (G730)	<.10	12-16-02 (1030)	880		
			250 and 1 250 11 75.65	2.77	H			
'i otal	12/3/02	2/4/02	Discharga (IDE (C721)					
Harages	12/13/02	12/14/02	Discrepty (0753)	0.800				
Total Publi	12/3/02	12/4/02	Discharge (056 (07 th)	0.202	12-04-02 (1445)		984 4507-P 8	0.00
S Existent 1 challen	12/13/02	12/14/04	Decreage 008 (0766)	0.5 65	12-16-02 (1050)	WLW		
Successive	12/3/02	12/4/02	Discharge 00% (0721)	<.01				0.01
Cyanida	12/13/02	12/14/02	Discharge (K.2 (0750)					
illote ; All	Cyanida ar	ialysis are p	veformed by Froshl	ing A. Ro	bertson Labora	itories in	Richasond,	VA

GILBERT W. CLIFFORD & ASSOCIATES, INC.

150 C Olde Greenwich Dr., Fredericksburg, VA 22408 (640) 898-2115

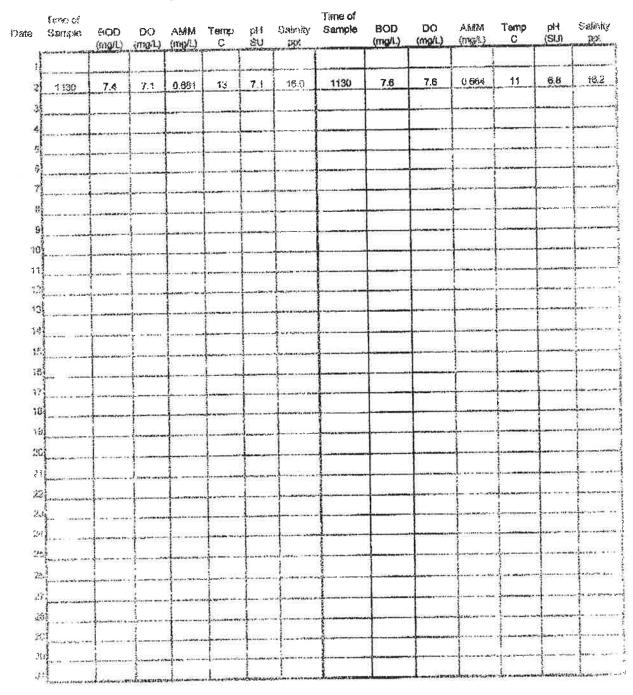
Omega Protein December, 2002

Amiyels	Date Collected	Date Receivad	Station	Recults (mg/L)	Date/Time Analyzed	Annilyet	Methoti	Chell (mg/l.)	
7 5 8	12/4/02	12/5/02	Discharge 202 (0305)	27.2	12-06-02 (1200)	MTM	SM 2540-D	1	
BOD	12/4/02	12/5/02	Discharge (X)2 (0305)	12.4	12-05-02 (1120)	SSC	SM 5210 B	ž.	
Oll & Grosses	12/4/02	12/5/02	Discharge 002 (0805)	<5	12-05-2 (1300)	WLW	EPA 1684	Ş	
Ammonia Narvat	12/4/02	12/5/02	Discharge 002 (0805)	27.7	12-05-02 (1110)	WLW	EPA 350.2	1 Titransetile	

Chesapeake Bay Water Quality Monitoring Data

Predischarge

After Discharge



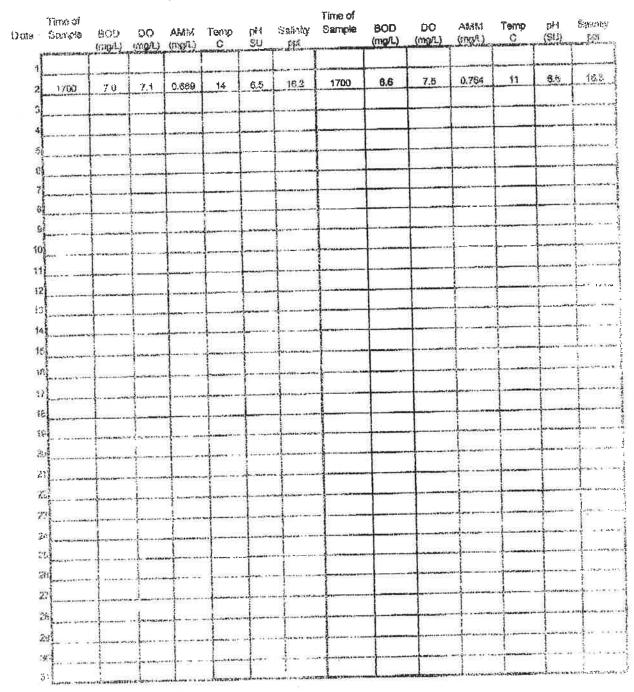
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Chesapeake Bay Water Quality Monitoring Data

Predischarge

After Discharge



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Zapaya Protein Reedvolle, V**irgnia** Lair Reportin**g**

ar.		Lagoon USZ			D		
	DATE	pH	EMP C	FLOW	ρH	TEMP G	FLOW
jamen	12/01/02 12/02/02 12/03/02 12/04/02	7,81	12	249600	7.81 7.96	17 13	2,036,479 11,881,120
Products NEADUT	12/05/02 12/05/02 12/05/02 12/05/02 12/05/02	7.8	B	21 8,200			
<i>t</i>	12/11/02 12/12/02 12/13/02 12/14/03 12/16/02 12/16/02	7.96 and of season	7	290,800	6.19 7.61 end of sesson	\$ \$	4,933,800 8,007,820
	12/11/02 12/18/02 12/18/02 12/24/02 12/24/02 12/24/02 12/24/02 12/24/02 12/24/02						
	12/25/02 12/25/02 12/25/02 12/26/03 12/26/03 12/21/02						
مر د	TOTAL	23.47	24	4997.7	148 31.57		8 25.718
	NVG.	7.82	8	A49.2	49 7.89	! !,	2 6.430
	MINZE.	7.8	. 25 pm	218	7.61	· c	2.035
	MAKE	7.86	12-	-281	8.19	1 /	7 11.84

EXCEPT FOR BOX 2.	orm runoff, leaks, or spills, are any of the discharge		gan B	□ NO (EO I	02 11.224)	1.07		
	Marie Manuel Millian Marie	3. FREG	MENCY			4. FLOW		
OUTFALL NUMBER (防t)	2: OPERATION(s) CONTRIBUTING FLOW (Hst)	E.DAYS PER MREK (specify specify	b. MONTHS FER YEAR (apacify guerage)	Ilp:n s. lbké tend Avenage	The second distriction of the second	7 12 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	ATITAL SALES	o oppe (in slave)
001	Scrubbers	5	8	3.1	4.2			150
002	Evaprator Condensate	7	8	0.21	0.48			240
4	Treatment Ponds					1		
003	Excess Evaporator Cond.	0	0	Not in	use at th	is time		
006	Evaporator Cooling Water	5	8	7.5	14.2			150
		AILY PRODU	CTION ERATION, PROF	ouct; Materia	L erc:			FALLS .
but is not or loan con	ow required by any feeters, State of local authorization and interesting or practices or any other environment to be into conditions, administrative or en	forcement or the following !	ders, enforcem table)	ation schredule by affect the cent compliant MNO (Ed	to Item IV-I	iters, štipulati	ading or opera s application? ons, court on	MALES
B. OPTIONA	L: You may attach additional sheets describing an argas! you down have timedriven or whild you hedules for construction	y additional w	rater pollution whether each	control progr	ams (or other	environment or planaed,	al projects who	ich may your ac

March 12, 2002

Denise Mosca Commonwealth of Virginia Department of Environmental Quality Kilmarnock, VA TRO TREE TRO

Re: Letter dated February 19, 2002
VPDES Permit Reissuance VA0003867
Omega Protein, Inc. Northumberland County

Dear Ms. Mosca

This letter responds to your request for more information, dated February 19. Our response is in the same format as your letter:

Cover Letter

a. Yes, the shipbuilding activity (off season maintenance) is only to be performed at the Fairport Boatyard.

FORM 1- General Information

a. The General Manager's original signature is provided.

Attachment D

- a. The General Manager's original signature is provided
- b. The Detection Levels are provided
- c. All analyses are provided except for Total Residual Chlorine which was overlooked when the analysis was performed. The plant is not operational now so a sample can't be taken. Chlorine has not and is not added to any of the outfalls. In fact, chlorine is not present on the plant site since it is not used in any process. The only possible exception are "chlorine" tablets that are used in so ne of the vessels' on board sanitary treatment unit. These tablets are restricted to use by the marine department.

You may be interested in the attached spreadsheet which provides the complete database of ammonia data for the future outfalls 001 and 006. As explained previously, we developed a sampling procedure in an effort to avoid "short circuiting" and to separate the scrubber outfall from the evaporator outfall. The data seems to suggest that the short circuiting is somewhere between "start up" and 1.5 hours after start up.

The 11.8 mg/l ammonia on September 10 is valid, we believe, in view of the 13.7 and the 89.9. However, the 89.9 is, by far, higher than anything we have seen in the past and may not be a valid number.

If you have any further questions, please contact me at 804/453-4211 or Bill Black at 713/868-2770.

yell Jett

Sincerely,

Lyell Jett

General Manager

Cc/ Bill Black

Attachment:

Ammonia datasheet

Form 1

Attachment D for Outfalls 001, 002, 006

Omega Protein-Reedville

3/12/2002

Ammonia results for future outfalls, mg/l

	for 001			for 006		
Date	start up	1.5 hrs later	2 hrs later	start up	1.5 hrs later	2 hrs later
4-Sep	5.43	13.7				
10-Sep	11.8			0.309		
17-Sep	4.18		89.9	0,298		0.575
22-Oct	2.4					0.553
4-Dec	6		9.24	0.281		0.555
BVO	5.962			0.296		

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO.: 006

	DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ^{©)}	SAMPLE FRE- QUENCY ^[3]	SPECIFIC TARGET VALUE	
			0		METALS ugl					
1920		*	Antimony (Dis.)	(5)	(5)	(.005 mg/L 25	G	1/5 YR	129000 all oùtfalls	
			Arsenic III (Dis.)	(5)	(5)	<.05 mg/L ₅₀	G	1/5 YR	[001,003, 004,005, 006: 55.2] [002: 634.8]	
-	440	01025	Cadmirm (Dis.)	(5)	(5)	<.001 mg/L,/	G	1/5 YR	[001,003, 004,005, 006: 34.4] [002: 279]	
	023	01032	Chromium VI	(5)	(5)	<.01 mg/L≠16	G	1/5 YR	[001,003, 004,005, 006: 880] [002: 1500]	
	442	01040	Copper (Dis.)	(5)	(5)	.117 mg/L n7	G	1/5 YR	[001,003, 004,005, 006: 2.32] [002: 26.68]	
	405	01049	Lead (Dis.)	(5)	(5)	(.001 // mg/L	G	1/5 YR	[001,003, 004,005, 006: 176] [002: 255]	
	444	71890	Mercury (Dis.)	(5)	(5)	(.0002 _{0.2}	G	1/5 YR	[001,002 004,005, 006: 1.0] [003: 1.68]	
	445	01065	Nickel (Dis.)	(5)	(5)	.014 • [4 mg/L	G	1/5 YR	[001,003, 004,005, 006: 60] [002: 249]	
	446	01145	Selenium (Dis.)	(5)	(5)	⟨.005 mg/L ∠5	G	1/5 YR	[001,003, 004,005, 006: 240] [002: 2130]	
9	447	01075	Silver (Dis.)	(5)	(5)	.024 mg/L 2	G !	1/5 YR	[001,003, 004,005, 006: 1.84] [002: 21.16	
	448	01092	Zinc (Dis.)	(5)	(5)	<.02 126 ⋅mg/L	G G	1/5 YR	[001,003, 004,005, 006: 76]	
			Mengarasa (Dis)			.098 mg	/L			

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.:

VA0003867

OUTFALL NO.: 006

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE ^{[4] ug3}				
PESTICIDES/PCB'S												
332	39330	Aldrin	608	0.05	<.05 ug/L	3G	1/5 YR	NA				
333	39350	Chiordane	608	0.2	⟨1.0 ug/L	3G	1/5 YR	NA				
334	77969	Chlorpyrifos (Dursban)	622	(7)	(.1 ug/L	3G	1/5 YR	NA				
		DDD	608	0.1	(.15 ug/L	3G	1/5 YR	NA				
		DDE	608	0.1	⟨.05 ug/L	3G	1/5 YR	NA				
335	39370	DDT	608	0.1	⟨.15 ug/L	3G	1/5 YR	NA				
336	39560	Demeton	(6)	(7)	(2.0 ug/L	3G	1/5 YR	- NA				
337	39380	Dieldrin	608	0.1	(.05 .ug/L	3G	1/5 YR	NA				
		Endosulfan	608	0.1	(15 ug/L	3G	1/5 YR	NA				
339	39390	Endrin	608	0.1	(.15 ug/L	3G	1/5 YR	NA				
340	39580	Guthion	622	(7)		3G	1/5 YR	NA				
341	39410	Heptachlor	608	0.05	<.05 ug/L	3G	1/5 YR	NA				
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05	(.04 ug/L	3 G	1/5 YR	NA				
		Kepone	(6)	(7)	⟨2.0	3G	1/5 YR .	NA				
343 .	39530	Malathion	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA				
344	39480	Methoxychlor -	(6)	(7)	₹.40 ug/L	3G	1/5 YR	NA				
345	39755	Mirex	(6)	(7)	(.10 ug/L	3G	1/5 YR	NA				
641		PCB-1242	608	1.0	1.0 mg/L	3G	1/5 YR	NA				
642		PCB-1254	608	1.0	(1.0 mg/L	3G	1/5 YR	NA				
643		PCB-1221	608	1.0	<1.0 mg/L	3G	1/5 YR	NA				
	-	PCB-1232	608	1.0	<1.0 mg/L	3G	1/5 YR	NA				
644	1	PCB-1248	608	1.0	< 1.0 mg/L	3G	1/5 YR	NA				
645	39508	PCB-1260	608	1.0	< 1.0 mg/L	3G	1/5 YR	NA				
646	38300	PCB-1016	608	1.0	< 1.0 mg/L	3G	1/5 YR	NA				

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.:		VA0003867	OUTFALL	NO.: 006				
DEQ PAR- AM#	EPA PAR- AM#	- CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽⁵⁾	REPORT- ING RESULTS	SAM-PLE TYPE ^{;2} i	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE ^{(4) us}
349	39400	Toxaphene	608	5.0	<1.0 ug/L	3G	1/5 YR	NA
647	05400	2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	(.002 mg/L	3 G	1/5 YR (PWS)	NA
n 1 . 325		free state of the	VEUTF	RAL EXTR	ACTAE	LES		
15es	given by a sec	Acenaphthene	625	10.0	<pre><10.0 ug/L</pre>	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	<pre> < 10.0 ug/L</pre>	3G	1/5 YR	NA
275		Benzo(a)anthracene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
276	34526	Benzo(b)fluoranthene	625	10.0	(10.0 ug/L	3G	1/5 YR	NA
648			625	10.0	<10.0 ug/L	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0	ζ10.0 · ug/L	3G	1/5 YR	NA
277	34247	Benzo(a)pyrene	625	10.0	<10.0 · ug/L	3G	1/5 YR	NA
		Butyl benzyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
282	34320	Chrysene		20.0	(10.0 ug/L	3G	1/5 YR	NA
654	-	Dibenz(a,h)anthracene	625	10.0	(10.0 ug/L	3G	1/5 YR	NA
		Dibutyl phthalate	625		<10.0 ug/L	3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
264	34566	1,3-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
266	34571	1,4-Dichlorobenzene	625	10.0	₹10.0	3G	1/5 YR	NA
		Diethyl phthalate	625	10.0	ug/L <10.0	3G	1/5 YR	NA
170		Di-2-Ethylhexyl Phthalale	625	10.0	\ug/L \(\frac{10.0}{10.0}\)		1/5 YR	NA NA
239	34611	2,4-Dinitrotoluene	625	10.0	ug/L	3G		NA
287	34376	Fluoranthene	625	10.0	ug/L 10.0	3G	1/5 YR	NA NA
288	34381	Fluorene	625	10.0	ug/L	3G	1/5 YR	
651		Indeno(1,2,3-cd)pyrene	625	20.0	ug/L	3G	1/5 YR	I NA
650		Isophorone	625	10.0	ug/L	3G	1/5 YR	NA NA
293	34696	Naphthalene	625	10.0	ug/L	3G	1/5 YR	NA NA
296	34469		625	10.0	ug/L	3G .	1/5 YR	NA NA

FACILITY NAME: Omega Protein

ADDRESS: P.O. Box 125, Resciville, Va. 22539

PERMIT NO .:

VA0003867

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ¹⁵³	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE ⁽⁴⁾
			V	DLATILES			and the second second	
216	34030	Benzene	624	10.0	ζ5.0 ug/L	G	1/5 YR	NA
484	32104	Eromoform	624	10.0	<pre>< 5.0 ug/L</pre>	G	1/5 YR	- NA
236	32102	Carbon Tetrachloride	624	10.0	<5.0 ug/L	G	1/5 YR	AN
652	02102	Di- Chlorodibromcmethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
223	32106	Chloroform	624	10.0	<5.0 ug/L	G	1/5 YR	NA
649	52100	Dichloromethane *	624	20.0	<5.0 ug/L	G	1/5 YR	NA
	79603	Dichlorobromemethane	624	20.0	<5.0 ug/L	G	1/5 YR	NA
244	34531	1,2-Dichloroe!hane	624	10.0	<5.0 ug/L	G	1/5 YR	NA
200	34351	1,1-Dichloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	<5.0 ug/L	G	1/5 YR	NA
	34371	Monochlorobenzene	624	50.0	<5.0 ug/L	G	1/5 YR	NA
653 220	34475	Tetrachloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR	NA
222	34010	Toluene	624	10.0	∠5.0 ug/L	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	<10.0 ug/L	G	1/5 YR	NA
170	05110		CIDS E	EXTRACT	ABLES			
ST STE	esie e		625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		2-Chlorophenol		10.0	<10.0 ug/L	3G	1/5 YR	NA
	-	2,4 Dichlorophenol	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	50.0	<50.0 ug/L	3G	1/5 YR	NA
210	39032		625	10.0	<10,0 ug/L	3G	1/5 YR	NA
175	45000	Phenol ⁽³⁾	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
602	34621	2,4,6-Trichloroshenol	SCHOOL STATE		*	1 5 80,00	North Resident	*
			MII2C	ELLANEO	3.7 mg/L]: · ·	1:	NIA
039	00610	Ammonia as NH3-N	350.1	200	Dissed	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	1/5 YR	NA NA
005	50060	Chlorine, Total Residual	(6)	100	sample (.01 mg/L	G	1/5 YR	NA NA
018	C0720	Cyanide	335.2	10.0	mg/L	l G	1/5 YR	NA NA

FACILITY NAME:

Omega Protein

ADDRESS: P.O. Box 125, Reedville, Va. 22539

. PERMIT NO .:

VA0003867

OUTFALL NO.:

006

31	DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL(1)	. RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE(4)
┢	AM #	Ziii ii	Fecal Coliform N/CML)	(6)	(7)	240 MPN/100 ML	G	1/5 YR	NA
-	407	00900	Hardness (as mg/l CaCO ₃)	(6)	(7)	5000 mg/L	С	1/5 YR	NA
-	137	00800	Hydrogen Sulfide	(6)	(7)	3.3 mg/L	G	1/5 YR	NA
-		7	Nitrate (as mg/l N)	(6)	(7)	⟨.1 □g/L	С	1/5 YR	NA .
;	350	30340	Tributlytin ⁽⁹⁾	NSB 85-3295	(7)	<.50 mg/L	С	 1/5 YR if believed present by permittee 	NA
	252	81551	Xylenes (total)	SW 846 Method 8020	(7)	<10,0 mg/L	G	1/5 YR	NA

Graham Lyell Jett

General Manager

Name of Principal Exec. Officer or Authorized Agent

-

Signature of Principal Officer or Authorized Agent

Date'

Title

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE
				/IETALS			esean a care	AND THE HEAR
	-1. F **	Antimony (Dis.)	(5)	(5)	(. 005 mg/L	G	1/5 YR	129000 a outfalls
		Arsenic III (Dis.)	(5)	(5)	<.05 mg/L	G	1/5 YR	[001,003 004,005 006: 55. [002: 634
440	01025	Cadmium (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,005 004,005 006: 34. [002: 27
023	01032	Chromium VI	(5)	(5)	<.01 mg/L	G	1/5 YR	[001,00 004,00 006: 88 [002: 15
442	01040	Copper (Dis.)	(5)	(5)	.117 mg/L	G	1/5 YR	[001,00 004,00 006: 2.3 [002: 26
405	01049	Lead (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,00 004,00 006: 17 [002: 2
444	71890	Mercury (Dis.)	(5)	(5)	<.0002 mg/L	G	1/5 YR	[001,00 004,00 006: 1 [003: 1.
445	01065	Nickel (Dis.)	(5)	(5)	.014 mg/L	G	1/5 YR	[001,00 004,00 006: 6 [002: 2
446	01145	Selenium (Dis.)	(5)	(5)	√.005 mg/L	G	1/5 YR	[001,00 004,00 006: 2 [002: 2
447	01075	Silver (Dis.)	(5)	(5)	.024 mg/L	G :	1/5 YR	[001,0 004,0 006: 1 [002: 2
448	01092	Zinc (Dis.)	- (5)	(5)	<.02 mg/L	G	1/5 YR	[001,0 004,0 006: 7

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

PERMIT	NO	VA0003867	OUTFALL					
DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE
		a a constant		CIDES/PC	B'S	is tookin to	v	July Steel See
332	39330	Aldrin	608	0.05	<.05 ug/L	3G	1/5 YR	NA
333	39350	Chlordane	608	0.2	<1.0 ug/L	3G	1/5 YR	NA
334	77969	Chlorpyrifos (Dursban)	622	(7)	(.1 ug/L	3G	1/5 YR .	NA
		DDD	608	0.1	(. 15 ug/L	3G	1/5 YR	NA
		DDE	608	0.1	<pre><.05 ug/L</pre>	3G	1/5 YR	NA
225	39370	DDT	608	0.1	(.15 ug/L	3G	1/5 YR	NA
335	39560	Demeton	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
336		Dieldrin	608	0.1	<.05 ⋅ug/L	3G	1/5 YR	NA
337	39380	Endosulfan	608	0.1	(.15 ug/L	3G	1/5 YR	NA
	00000		608	0.1	(.15 ug/L	3G	1/5 YR	NA
339	39390	Endrin Guthion	622	(7)	₹20 mg/L	3G	1/5 YR	NA
340	39580		608	0.05	₹.05 ug/L	3G	1/5 YR	NA
341	77835	Heptachlorocyclohexane (Lindane)	608	0.05	<.04 ug/L	3G	1/5 YR	NA
			(6)	(7)	(2.0 ug/L	3G	1/5 YR	NA
		Kepone	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA
343	39530	Malathion	(6)	(7)	<.40 ug/L	3G	1/5 YR	NA
344 345	39480	Methoxychlor Mirex	(6)	(7)	(.10 ug/L	3G	1/5 YR	NA
644		PCB-1242	608	1.0	1.0 mg/L	3G	1/5 YR	NA
641		PCB-1254	608	1.0	(1.0 mg/L	3G	1/5 YR	NA NA
642		PCB-1221	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
643			608	1.0	(1.0 mg/L	3G	1/5 YR	NA
644		PCB-1232	608	1,0	<1.0 mg/L	3G	1/5 YR	NA
645	00500	PCB-1248	608	1.0	<1.0 mg/L	3G	1/5 YR	NA
618	39508	PCB-1260 PCB-1016	608	1.0	<1.0 mg/L	3G	1/5 YR	NA

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

				3-17114-5-10-10-10-10-10-10-10-10-10-10-10-10-10-				
DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE(4) 11/27
349	39400	Toxaphene	608	5.0	<1.0 ug/L	3G	1/5 YR	NA
647	33400	2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	(.002 mg/L	* 3G	1/5 YR (PWS)	NA
		free and the season of the second	NEUTF	RAL EXTR	ACTAE	LES	see of the section of the	20 NO 100 Face 100
* . * 100	AND IN COLUMN	that the second of the second	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		Acenaphthene		10.0	<10.0 ug/L	3G	1/5 YR	NA.
275	34222	Anthracene	625		<10.0 ug/L	3G	1/5 YR	NA.
276	34526	Benzo(a)anthracene	625	10.0	₹10.0		1/5 YR	NA NA
648		Benzo(b)fluoranthene	625	10.0	\dig/L \dig/L	3G		
278	34242	Benzo(k)fluoranthene	625	10.0	ug/L <10.0	3G	1/5 YR	NA
277	34247	Benzo(a)pyrene	625	10.0	\ug/L \(\forall 10.0	3G	1/5 YR	NA NA
		Butyl benzyl phthalate	625	10.0	ug/L <10.0	3G	1/5 YR	NA
282	34320	Chrysene	625	10.0	ug/L	3G	1/5 YR	NA
	04020	Dibenz(a,h)anthracene	625	20.0	(10.0 ug/L	3G	1/5 YR	NA
654		Dibutyl phthalate	625	10.0	(10.0 ug/L	3G	1/5 YR	NA
			625	10.0	(10.0 ug/L	3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
264	34566	1,3-Dichlorobenzene		10.0	(10.0 ug/L	3G	1/5 YR	NA
266	34571	1.4-Dichlorobenzene	625		<10.0 ug/L	3G	1/5 YR	NA
		Diethyl phthalate	625	10.0	₹10.0	3G	1/5 YR	NA NA
170		Di-2-Ethylhexyl Phthalate	625	10.0	ug/L <10.0			NA NA
239	34611	2,4-Dinitrotoluene	625	10.0	ug/L	-3G	1/5 YR	
287	34376	Fluoranthene	625	10.0	ug/L <10.0	3G	1/5 YR	NA NA
288	34381	Fluorene	625	10.0	ug/L <10.0	3G	1/5 YR	NA_
651		Indeno(1,2,3-cd)pyrene	625	20.0	ug/L	3G	1/5 YR	NA_
650		Isophorone	625	10.0	(10.0 ug/L	3G	1/5 YR	NA
	34696	Naphthalene	625	10.0	(10.0 ug/L	3G	1/5 YR	NA
293			625	10.0	10.0 ug/L	3G .	1/5 YR	NA
296	34469	Pyrene	625	10.0	C10.0 ug/L	: 3G	1/5 YR	NΙΔ

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE(4) **
			V	DLATILES			· · · · · · ////// • ·	~ n ~
216	34030	Benzene	624	10.0	ζ5.0 ug/L	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	√5.0 ug/L	G	1/5 YR	NA
236	32102	Carbon Tetrachloride	624	10.0	<5.0 ug/L	G	1/5 YR	NA
652		Chlorodibromomethane	624	10.0	√ 5.0 ug/L	G	1/5 YR	NA
223	32106	Chloroform	624	10.0	<5.0 ug/L	G	1/5 YR	NA
649		Dichloromethane	624	20.0	√5.0 ug/L	G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0	< 5.0 ug/L	G	1/5 YR	NA
260	34531	1,2-Dichloroethane	624	10.0	<5.0 ug/L	G	1/5 YR	NA
200		1,1-Dichloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
653		Monochlorobenzene	624	50.0	<5.0 ug/L	G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR	NA
222	34010	Toluene	624	10.0	∠5.0 ug/L	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	<10.0 ug/L	G	1/5 YR	NA
		A	CIDS	XTRACTA	ABLES			8
		2-Chlorophenol	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
	20022	Pentachlorophenol	625	50.0	<50.0 ug/L	3G	1/5 YR	NA
210	39032	Phenol ⁽⁸⁾	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
175 602	46000 34621	2,4,6-Trichlorophenol	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
002	0.4021		MISC	ELLANEC	ous			april Walland
039	00610	Ammonia as NH3-N	. 350.1	200	3.7 mg/L missed		1/5 YR	NA
005	50060	Chlorine, Total Residual	(6)	100	sample	G	1/5 YR	NA
	-		335.2	10.0	1 \no71	G	1/5 YR	NA

FACILITY NAME:

Omega Protein

ADDRESS: P.O. Box 125, Reedville, Va. 22539

. PERMIT NO .:

VA0003867

OUTFALL NO.:

006

DEQ PAR-	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE(4) by
AM#	Aillim	Fecal Coliform N/CML)	(6)	(7)	240 MPN/100 ML	G	1/5 YR	NA
407	00900	Hardness (as mg/l CaCO ₃)	(6)	(7)	5000 mg/L	С	1/5 YR	NA
137	00900	Hydrogen Sulfide	(6)	(7)	3.3 mg/L	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	く・1 mg/L	С	1/5 YR	. NA
350	30340	Trībutlytin ⁽⁹⁾	NSB 85-3295	(7)	<.50 mg/L	С	1/5 YR if believed present by permittee	NA
252	81551	Xylenes (total)	SW 846 Method 8020	(7)	<10,0 mg/L	G	1/5 YR	NA

Graham Lyell Jett	General Manager	
Name of Principal Exec. Officer or Authorized Agent /	Title	
Anaham Lucal St	3/13/02	
Signature of Principal Officer or Authorized egent /	Date	

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the Information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false Information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may Include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

720// Fish Oil	7:
VIII. OPERATOR INFORMATION	S. Is the name listed in
al 1 1 1 1 1 1 1 1 1	Item VIII-A also the cweet? Asset
Omega Protein, Inc.	X YES □ NO
	B. PHONE (orea code & no.) 1.75
C. STATUS OF OPERATOR (Enter the appropriate letter into the	THE LOCAL CENT HAND AND THE PROPERTY OF THE PR
S = STATE O = OTHER (specify)	M assertion A 804 453 4211 2
E. STREET CR P.O. BOX	
' PO Box 175	
F. CITY OR TOWN	GISTATE H. ZIP CODE IX. INDIAN LAND I I I I I I I I I I I I I I I I I I I
Reedville	IVA DYES QNO TOPE
[6]	13 17 42 147 - 31
X. EXISTING ENVIRONMENTAL PERMITS	
A. NPDES (Dutt urges to Surface Water) D. PSD (Air En	nitations from Proposed Sources)
Is in I VAUCUSUUT	0278
B. M. C. Constraint Injection of Finise;	OTHER (SPESSY)
5:714 1 . 1 . 1 . 1 . 1 . 1 . 1	AR540298 Storm Water
(316)719	CTHER (SSIGÍTI
C. RCRA , Hetardous Wastes)	/AR540312 Storm Water-Fairport
9 R 9 1 1 1 1 1 1 1 1 1	355
	iding to at least one mile beyond property boundaries. The map must show and proposed intake and discharge structures, each of its hazardous waste of
the outline of the facility, the location of each of its existing treatment, storage, or disposal facilities, and each well where water bodies in the map area. See instructions for precise requi	it injects fiulds underground. Include all springs, rivers and other surface
XII. NATURE OF BUSINESS (provide a brief description)	
Processing of Menhaden Fish to	obtain Fish Oil, Fish Solubles and Fish Meal
1	
for sale for use in animal feed a	nd other applications
Tot care for a same	
į.	
-	
XIII. CERTIFICATION (see instructions)	and all
I certify under penalty of law that I have personally examine attachments and that, based on my inquiry of those person application, I believe that the information is true, accurate a false information, including the possibility of fine and imprison	ed and am familier with the information submitted in this explication and all instrumediately resonable for obtaining the information contained in the and complete. I am ewere that there are significant penalties for submitting inment.
I certify under penalty of law that I have personally examine attachments and that, based on my inquiry of those personally examine that the information is true, accurate a	and complete. I am aware that there are significant panalties for submitting
I certify under penalty of law that I have personally examine attachments and that, based on my inquiry of those person application, I believe that the information is true, accurate a false information, including the possibility of fine and imprison	and complete. I am ewere that there are significant panelties for submitting
I certify under pecalty of law that I have personally examine attachments and that, based on my inquiry of those personal polication, I believe that the information is true, accurate a false information, including the possibility of fine and imprison the possibility of	and complete. I am aware that there are significant panalties for submitting

EDA Form 3510-1 (8-90)

27 (1) - (1)	1	D. FOURTH	2 13
C. THIRD	7 I (specify)		
7120// Fish Oil	1 1 1 1 1 1 1		
VIII. OPERATOR INFORMATION	TO NOTE IN THE ASSESSMENT OF	A STATE OF THE STATE OF	S. Is the name listed in
	maria a a a a a a a a a a a a a a a a a a	111111	CWNer?
Omega Protein, Inc.			X YES DING
<u> </u>	handituGeheelt granifu l	D. PHONE (cr	ca code & no.) . To .
C. STATUS OF SPERATOR (Enter the appropriate letter into the sa	swer box:11 Omer , specify:	TI I DON I A	53 114211
S = STATE O = OTHER (specify)		A 004 4	21 12 - 21 7
P = PRIVATE	3 00 A 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1		1.147.470
' PO Box 175			
26	G.STATE H. ZIP COD	E IX. INDIAN LAND	
F. CITY OR TOWN	TI INALL TO	Is the facility located	on Indian lands? 등록된다 [V] NO
Reedville		→ □ YES	× 110
13 16	45 41 42 41 *		
X. EXISTING ENVIRONMENTAL PERMITS A. NPDES (Buthurges to Surface Water) D. PSO (Air Emiz.	ions from Proposed Sources)		
VA0003867 40	278	7 (gr)	
SINI 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	HER (specify)		
B. UIC (Underground Injection of Fullos;		Storm Wa	ater
9 U 9 9 9 1 1 1 1 1 1 1		0.01111 770	and the second
E OCD A (Metardout Wasies)	THER (specify)	ecify Storm W:	ater-Fairport
OIRI I	R540312 "	Otolili 111	ater ranport
9191919			
Arrach to this application a topographic map of the area extends	ng to at least one mile beyond p	property bounderies. If	ts hazardous waste
the outline of the facility, the location of each of its existing and each well where it	injects fluids underground. Inc	lude all springs, rivers	and other surface
treatment, storage, or disposal facilities, and desired water bodies in the map area. See instructions for precise required	nents.		
XII. NATURE OF BUSINESS (provide a brief description)			ESTABLISHED INVESTORS
Processing of Menhaden Fish to o	btain Fish Oil, Fish	r Solubles an	d Fish Meal
Processing of Merinadon Fields	,		
for sale for use in animal feed an	d other application	1S	
101 Sale for doc in arminar room	11		
Į.			
XIII. CERTIFICATION (see instructions)		t in a district	e annication and all
I certify under pecalty of law that I have personally examined attachments and that, based on my inquiry of those persons	and am familiar with the inform immediately responsible for or	nation submitted in thi btaining the informati	on contained in the
attachments and shat, based on my inquiry of	i complete. I am aware that th	ere are significant pen	elties for submitting
false information, including the possibility of this end in pro-			DATE SIGNED
Lyell Jett, General Manager	NATURE 11		3/13/02
Lyen Jett, General Manager	Well Les	10	
COMMENTS FOR CFFICIAL USE ONLY			
<u>cl </u>			
C			

EPA Form 3510-1 (3-90)

ATTACHMENT D

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

F									
	DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ²²	SAMPLE FRE- QUENCY [®]	SPECIFIC TARGET VALUE (1) 10 p./
			2 2 2 2	Tan at his first	METALS		eration of the		
		-54	Antimony (Dis.)	(5)	(5)	√.005 mg/L	G	1,5 YR	129000 all cutfalls
	ii.		Arsenic III (Dis.)	(5)	(5)	< .05 mg/L	G	15 YR	[001,003, 004,005, 006: 55.2] [002: 634.8]
	440	01025	Cadmium (Dis.)	(5)	(5) :	.008 mg/L	G	1.5 YR	[001,003, 604,005, 006: 34.4] [002: 279]
	023	01032	Chromium VI	(5)	(5)	<.01 · mg/L	G	1/5 YR	[001,003, 004,005, 006: 880] [002: 1500]
	442	01040	Copper (Dis.)	(5)	(5)	.088 mg/L	G	15 YR	[001,003, 004,005, 006: 2.32] [002: 26.68]
	405	01049	Lead (Dis.)	(5)	(5)	<.001 mg/L	G	15 YR	[001,003, 004,005, 006: 176] [002: 255]
	444	71890	Mercury (Dis.)	(5)	(5)	<.0002 mg/L	G	1/5 YR	[001,002 004,005, 006: 1.0] [003: 1.68]
	445	01065	Nickel (Dis.)	(5)	(5)	<.005 mg/L	G	1.5 YR	[001,003, 004,005, 006: 60] [002: 249]
	445	01145	Selenium (Dis.)	(5)	(5)	<.005 mg/L	G	15 YR	[001,003, 004,005, 006: 240] [002: 2130]
)	447	01075	Silver (Dis.)	(5)	(5)	.027 ng/L	G :	1.5 YR	[001,003, 004,005, 006: 1.84] [002: 21.16]
	448	01092	Zinc (Dis.)	÷ (5)	(5)	< .02 mg/L	. G .	1.5 YR	[001,003, 004,005, 005: 76]

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ^[1]	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE
			PEST	CIDES/PC	B'S		ಪ್ರಸ್ತಿ ಪ್ರವೇಶಕ್ಕಿಗಳು	and all the care
	00000	Aldrin	608	0.05	<.05 ug/L	3G	1/5 YR	NA
332	39330	Chlordane	608	0.2	<1.0 ug/L	3G	1/5 YR	NA
333	77969	Chlorpyrifos (Dursban)	622	(7)	<.1 ug/L	3G	1/5 YR	NA
		DDD	608	0.1	√.15 dg/L dg/L	3G	1/5 YR	NA
		DDE	608	0.1	<pre><.05 . ug/L</pre>	3G	1/5 YR	NA
335	39370	DDT	608	0.1	(.15 ug/L	3G	1/5 YR	NA
336	39560	Demeton	(6)	(7)	< 2.0 ug/L	3G	1/5 YR	NA
337	39380	Dieldrin	608	0.1	<.05 ⋅ug/L	3G	1/5 YR	NA
331	33300	Endosulfan	608	0.1	<.15 ug/L	3 G	1/5 YR	NA
410	39390	Endrin	608	0.1	(.15 ug/L	3G	1/5 YR	NA_
339 340	39580	Guthion	622	(7)		3G	1/5 YR	NA_
	39410	Heptachlor	608	0.05	⟨.05 ug/L	3G	1/5 YR	NA
341 342	77835	Hexachlorocyclohexane (Lindane)	608	0.05	C.04 ug/L	3G	1/5 YR	NA
		Kepone	(6)	(7)	\(\) \(\) \(\) \(\)	3G	1/5 YR	NA
	39530	Malathion	(6)	(7)		3G	1/5 YR	NA
343	39480	Methoxychilor	(6)	(7)	₹.40 ug/L	3G	1/5 YR	NA NA
344	39755	Mirex	(6)	(7)	<.10 ug/L	3G	1/5 YR	NA
011		PCB-1242	608	1.0	S1.0 Eg/L	3G	1/5 YR	NA NA
641		PCB-1254	608	1.0	21.0 ng/L	3G	1/5 YR	NA
642		PCB-1234	608	1.0	1.0 ng/L	3G	1/5 YR	NA NA
643			608	1.0	(1.0 -38/L)	3G	1/5 YR	NA
644		PCB-1232	608	1.0	1.0 1/L	3G	1/5 YR	NA
645	1	PCB-1248	608	1.0	X1.0 Gg/L	3G	1/5 YR	NA
618	39508	PCB-1260 PCB-1016	608	1.0	Zg/L	: 3G	1/5 YR	NA.

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.:

VA0003867

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OUTFALL NO.:	00
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DEQ PAR- AM#	EPA PAR- AM#	- CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ^{IS}	RESULTS	SAM-PLE TYPE [®]	SAMPLE FRE- QUENCY ⁽²⁾	SPECIFIC TARGET VALUE				
349	39400	Toxaphene	608	5.0	1.0 ug/L	3G	1/5 YR	NA				
647		2-(2,4,5-Trichlorophenexy) propionic acid (Siivex)	(6)	(7)		3G	1/5 YR (PWS)	NA				
•	BASE NEUTRAL EXTRACTABLES											
Series of the	Service Service	Acenachthene	625	10.0	<pre>10.0 ug/L</pre>	3G	1/5 YR	NA				
275	34222	Anthracene	625	10.0	< 10.0 ug/L	33	1/5 YR	NA.				
276	34526	Benzo(a)anthracene	625	10.0		39	1/5 YR	NA				
648		Benzo(b)fluoranthene	625	19.0	< 10.0 ug/L	3G	1/5 YR	NA NA				
278	34242	Benzo(k)fluorenthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA				
277	34247	Benzo(a)pyrene	625	10.0	10.0 ug/L	39	1/5 YR	NA NA				
		Butyl benzyl phthalate	625	10.0	<10.0 ug/L	39	1/5 YR	NA				
282	34320	Chrysene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA NA				
654		Dibenz(a,h)anthracene	625	20.0	(10.0 ug/L	3G	1/5 YR	NA NA				
		Dibutyl phthalate	625	10.0	(10.0 ug/L	3G	1/5 YR	NA				
259	34536	1,2-Dichlorobenzene	625	10.0	(10.0 ug/L	3G	1/5 YR	NA				
264	34566	1,3-Dichlorobenzene	625	10.0	<10.0 ug/L	3G .	1/5 YR	NA				
266	34571	1,4-Dichlorobenzene	625	10.0	∠10.0 ug/L	3G	1/5 YR	NA				
		Diethyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA _				
170		Di-2-Ethylhexyl Phthalate	625	10.0	(10.0 ug/L	3G	1/5 YR	NA NA				
239 -	34611	2,4-Dinitrotoluene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA NA				
287	34376	Fluoranihene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA I				
288	34381	Fluorene	625	10.0	(10.0 ug/L	3G	1/5 YF.	NA NA				
651		Indeno(1,2,3-cd)pyrene	625	20.0	<10.0 ug/L <10.0	3G	1/5 YR	NA				
650		Isophorene	625	10.0	ug/L <10.0	3G	1/5 YF	NA				
293	34595	Naphthalene	625	10.0	ug/L	3G	1/5 YR	NA I				
256	34469	Pyrene	625	10.0	<10.0 ug/L <10.0 ug/L	3G .	1/5 YR	NA NA				
		1 2 4 Trichlorobanzana	625	10.0	ug/L	3.3	115 VO	NIA.				



FACILITY NAME: Omega Protein

ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .: . VA0003867

OUTFALL NO.: 001

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE(4)**
•			V	DLATILES	out the a	5+ 3 5 5 7 10 2	· · · · · · · · · · · · · · · · · · ·	.5 20.35
216	34030	Benzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	<5.0 u⊵/L	G	1/5 YR	NA NA
236	32102	Carbon Tetrachlorida	624	10.0	<5.0 ug/L	G	1/5 YR	NA
652		Chlorodibromomethans	624	10.0	<5.0 ug/L	G	1/5 YR	NA
223	32106	Chloroform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA NA
649		Dichloromethane	624	20.0	< 5.0 ug/L	G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0	<5.0 ug/L	G	1/5 YR	NA NA
250	34531	1,2-Dichloroethane	624	10.0	<5.0 ug/L	G	1/5 YR	NA NA
		1,1-Dichloroethylene	624	10.0	<5.0 ug/L <5.0	G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	· ug/L	G	1/5 YR	NA
653		Monochlorobenzene	624	50.0	VE/L	G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR	NA NA
222	34010	Toluene	624	10.0	₹5.0 ug/L <5.0	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0	ug/L	G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	∠10.0 ug/L	G	1/5 YR	NA NA
		A	CIDS E	XTRACTA	ABLES	- VIII (1975)		3
	d couples	2-Chlorophenol	625	10.0	<pre>/10.0 ug/L</pre>	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	(10.0 ug/L	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0		3G	1/5 YR	NA
210	39032	Pentachlorophecol	625	50.0	∠50.0 ug/L ∠10.0	3G	1/5 YR	NA
175	46000	Phenol ⁽⁸⁾	625	10.0	\ \(\lambda 10.0 \) \text{ug/L} \tag{10.0}	3G	1/5 YR	NA
€52	34621	2,4,6-Trichlorophenci	625	10.0	10.0 ug/L	3G	1/5 YR	NA
SAUL X	ė arai ir		MISC	ELLANEC	OUS	3		
039	00610	Ammonia as NH3-N	350.1	200	2.4 mg/L	С	1/5 YR	NA
	50060	Chlorine, Total Residua.	(6)	100		G	1/5 YR	NA
CO5	50000	Cyanide	335.2	10.0	Zmg/L	G	1/5 YR	NA

10.0



00720 Cyanide

FACILITY NAME:

Omega Protein

ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

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VA0003867

OUTFALL NO.:

001

DEQ PAR- AM#	EPA PAR- AM#	. CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	RESULTS	SAM-PLE TYPE ^{ZI}	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE(4) up
Am #	Amn	Fecal Coliform N/CML)	(6)	(7)	1600 MPN/100 NL	G	1/5 YR	NA
407	00000	Hardness (as mg/l CaCO ₃)		(7)	5340 mg/L	С	1/5 YR	NA
137	00900	Hydrogen Sulfide	(6)	(7)	2.5 mg/L	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	ζ.1 mg/L	С	1/5 YR	NA
350	30340	Tributlytin ⁽⁹⁾	NSB 85-3295	(7)	<.50 ug/L	С	1/5 YR if believed present by permittee	NA
2 52	81551	Xylenes (total)	SW 846 Method 8020	(7)	∠10.0 ug/L	G	1/5 YR	NA

General Manager Graham Lyell Jett Name of Principal Exec. Officer or Authorized Agent Title Signature of Principal Officer or Authorized Agent Date

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel property gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

	DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ^{E)}	SPECIFIC TARGET VALUE ^{(4) up} 1
	1000		(C)	7	METALS			maken in the	1. 6 3
	2 · · · · · · · · · · · · · · · · ·		Antimony (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	129000 all outfalls
			Arsenic III (Dis.)	(5)	(5)	<.05 mg/L	G	1/5 YR	[001,003, 004,005, 006: 55.2] [002: 634.8]
	440	01025	Cadmium (Dis.)	(5)	(5)	.008 mg/L	G	1/5 YR	[001,003, 004,005, 006: 34.4] [002: 279]
	023	01032	Chromium VI	(5)	(5)	<.01 mg/L	G	1/5 YR	[001,003, 004,005, 006: 880] [002: 1500]
	442	01040	Copper (Dis.)	(5)	(5)	.088 mg/L	G	1/5 YR	[001,003, 004,005, 006: 2.32] [002: 26.68]
	405	01049	Lead (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 176] [002: 255]
	444	71890	Mercury (Dis.)	(5)	(5)	<.0002 mg/L	G	1/5 YR	[001,002 004,005, 006: 1.0] [003: 1.68]
	445	01065	Nickel (Dis.)	(5)	(5)	<.005 mg/L	e G	1/5 YR	[001,003, 004,005, 006: 60] [002: 249]
-	446	01145	Selenium (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	[001,003, 004,005, 006: 240] [002: 2130]
)	447	01075	Silver (Dis.)	(5)	(5)	.027 mg/L	G ;	1/5 YR	[001,003, 004,005, 006: 1.84] [002: 21.16]
	448	01092	Zinc (Dis.)	° (5)	(5)	<pre></pre>	, G	1/5 YR	[001,003, 004,005, 006: 76]

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE ^{(4) ug/2}			
PESTICIDES/PCB'S											
332	39330	Aldrin	608	0.05	⟨.05 ug/L ⟨1.0 ⟩	3G	1/5 YR	NA			
333	39350	Chlordane	608	0.2	ug/L	3G	1/5 YR	NA			
334	77969	Chlorpyrifos (Dursban)	622	(7)	<.1 ug/L	3G	1/5 YR .	NA			
		DDD	608	0.1	<.15 ug/L	3G	1/5 YR	NA			
		DDE	608	0.1	<.05 ug/L	3G	1/5 YR	NA			
335	39370	DDT	608	0.1	(.15 ug/L	3G	1/5 YR	NA			
336	39560	Demeton	(6)	(7)	<2.0 ug/L	3G	1/5 YR	NA			
337	39380	Dieldrin	608	0.1	<.05 ⋅ug/L	3G	1/5 YR	NA			
		Endosulfan	608	0.1	₹.15 ug/L	3G	1/5 YR	NA NA			
339	39390	Endrin	608	0.1	V.15 ug/L	3G	1/5 YR	NA			
340	39580	Guthion	622	(7)		3G	1/5 YR	NA NA			
341	39410	Heptachlor	608	0.05	√.05 ug/L	3G	1/5 YR	NA_			
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05		3G	1/5 YR	NA			
		Kepone	(6)	(7)	2.0 ug/L	3G	1/5 YR	NA			
343 -	39530	Malathion	(6)	(7)	⟨2.0 ug/L	3G	1/5 YR	NA NA			
344	39480	Methoxychlor	(6)	(7)	4.40 ug/L	3G	1/5 YR	NA			
345	39755	Mirex	(6)	(7)	<.10 ug/L	3G	1/5 YR	NA			
641		PCB-1242	608	1.0	<1.0 mg/L	3G	1/5 YR	NA			
642		PCB-1254	608	1.0	(1.0 mg/L	3G	1/5 YR	NA			
643		PCB-1221	608	1.0	<1.0 mg/L	3G	1/5 YR	NA_			
644		PCB-1232	€08	1.0	<1.0 mg/L	3G	1/5 YR	NA NA			
645		PCB-1248	608	1.0	(1.0 mg/L	3G	1/5 YR	NA NA			
618	39508	PCB-1260	608	1.0	<1.0 mg/L	3G	1/5 YR	NA_			
646	1	PCB-1016	€08	1.0	<1.0 mg/L	: 3G	1/5 YR	NA			

FACILITY NAME: Omega Protein ADDRESS: P.O. Eox 125, Reedville, Va. 22539

PERMIT NO.:

VA0003867

PERMIT	140	VA0000001									
DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ^{US}	RESULTS	SAM-PLE TYPE [®]	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE			
349	39400	Toxaphene	E08	5.0	<1.0 ug/L	3 G	1/5 YR	NA			
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	<.002 ⊐g/L	3G	1/5 YR (PWS)	NA			
BASE NEUTRAL EXTRACTABLES											
ALC	Service Co.	Acenaphthene	625	10.0		3G	1/5 YR	NA			
275	34222	Anthracene	625	10.0	<pre>10.0 ug/L</pre>	30	1/5 YR	NA			
276	34526	Benzo(a)anthracene	€25	10.0	∠10.0 □2/L	36	1/5 YR	NA NA			
648	0.020	Eenzo(b)fluoranthene	625	10.0	78/F	39	1/5 YR	2 NA			
278	34242	Eenzo(k)fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA			
277	34247	Eenzo(a)pyrene	625	10.0	\$10.0 :ug/L	3G	1/5 YR	NA			
211	04241	Eutyl benzyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA			
282	34320	Chrysene	625	10.0	(10.0 ug/L	3 G	1/5 YR :	NA.			
654	34320	Dibenz(a,h)anthracene	625	20.0	(10.0 ug/L	3G	1/5 YR	NA			
034		Dibutyl phthalate	625	10.0	(10.0 ug/L	3G	1/5 YR	NA			
250	34536	1.2-Dichlorobenzene	625	10.0	(10.0 ug/L	3G	1/5 YR	NA			
259 264	34566	1,3-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA			
	34571	1,4-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA			
266	34371	Diethyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA.			
170		Di-2-Ethylhexyl Phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA			
	24611	2,4-Dinitrotoluene	625	10.0	∠10.0 22/L	3G	1/5 YR	NA			
239	34611	Ficoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA _			
287	34376		625	10.0	(10.0 ug/L	3G	1/5 YR	NA.			
288	34381	Indeno(1,2,3-cd)pyrene	625	20.0	<10.0 ug/L	3G	1/5 YR	NA			
651	-		625	10.0	<10.0 ug/L	ЗG	1/5 YR	NA_			
650	1 0,555	Iscanorone	625	10.0	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	3G	1/5 YR	NA			
293	34595	Nachthalene	625	10.0	(10.0 22/L	3G .	1/5 YR	NA NA			
296	34489	Pyrene	675	10.0	7-0.0 22/L	: 36	1/5 VO	N/A			



FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.:

VA0003867

DEQ PAR- AM#	PAR-	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL [®]	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽²⁾	SPECIFIC TARGET VALUE				
VOLATILES												
216	34030	Benzene	624	10.0	5.0 ug/L	G	1/5 YR	NA				
484	32104	Bromoform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA				
236	32102	Carbon Tetrachloride	624	10.0	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	G	1/5 YR	NA				
652		Chlorodibromomethane	624	10.0	<5.0 ug/L	G	1/5 YR	NA				
223	32106	Chloroform	624	10.0	∠5.0 ug/L	G	1/5 YR	NA				
649		Dichloromethane	624	20.0	<5.0 ug/L	G	1/5 YR	NA				
244	79603	Dichlorobromomethane	624	20.0	<5.0 ug/L	G	1/5 YR	- NA				
260	34531	1,2-Dichloroethane	624	10.0	<5.0 ug/L	G	1/5 YR	NA				
		1,1-Dichloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR	NA				
172	34371	Ethylbenzene	624	10.0	<5.0 ug/L	G	1/5 YR	NA				
653		Monochlorobenzene	624	50.0	<5.0 ug/L	G	1/5 YR	NA				
220	34475	Tetrachloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR	NA				
222	34010	Toluene	624	10.0	√5.0 ug/L	G	1/5 YR	NA				
155	39180	Trichloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR	NA				
173	39175	Vinyl Chloride	624	10.0	∠10.0 ug/L	G	1/5 YR	NA				
		A	CIDS EX	KTRACTA	BLES							
III TAINAIL		2-Chlorophenol	625	10.0	<10.0 ug/L	3G	1/5 YR	NA				
		2,4 Dichlorophenol	625	10.0	<10.0 ug/L	3G	1/5 YR	NA				
		2,4 Dimethylphenol	625	10.0	⟨10.0 ug/L	3G	1/5 YR	NA				
210	39032	Pentachlorophenol	625	50.0	₹50.0	3G	1/5 YR	NA				
175	46000	Phenol ⁽⁸⁾	625	10.0	ug/L	3G	1/5 YR	NA .				
652	34621	2,4,6-Trichlorophenol	€25	10.0	ug/L <10.0 ug/L	3G	1/5 YR	NA				
			MISCE	LLANEO	US		•	•				
039	00610	Ammonia as NH3-N	350.1	200	2.4 mg/L	c	1/5 YR	NA				
C55	50060	Chlorine, Total Residual	(6)	100		G	1/5 YR	NA				
cia	00720	Cyanide	335.2	10.0	ζ _{mg} /L	G	1/5 YR	NA				

FACILITY NAME:

Omega Protein

ADDRESS: P.O. Box 125, Reedville, Va. 22539

. PERMIT NO .:

VA0003867

OUTFALL NO.: 00

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE(4) up/
		Fecal Coliform N/CML)	(6)	(7)	1600 MPN/100 ML	G	1/5 YR	NA -
137	00900	Hardness (as mg/l CaCO ₃)	(6)	(7)	5340 mg/L	С	1/5 YR	NA
		Hydrogen Sulfide	(6)	(7)	2.5 mg/L	G	1/5 YR	NA
		Nitrate (as mg/l N)	(6)	(7)	<pre>C.1 mg/L</pre>	С	1/5 YR	NA .
350	30340	Tribullytin ⁽⁹⁾	NSB 85-3295	(7)	∠.50 ug/L	С	1/5 YR if believed present by permittee	NA
2 52	81551	Xylenes (total)	SW 846 Method 8020	(7)	∠10.0 ug/L	G	1/5 YR	NA

Graham Lyell Jett	General Manager	Λ
Name of Principal Exec. Officer or Authorized	Agent / Title ,	
2) whom Level ?	At 3/13/62	€ ∵
Signature of Principal Officer of Authorized Age	ent / Date	3

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel property gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.:

VA0003867

002 OUTFALL NO.:

DEQ PAR- AM#		CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ^{D)}	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE ^{(4) ug/}
			,	METALS		¥		
Ve -e : 55		Antimony (Dis.)	(5)	(5)	⟨. 005 mg/L	G	1/5 YR	129000 all outfalls
		- Arsenic III (Dis.)	(5)	(5)	<.05 mg/L	G	1/5 YR	[001,003, 004,005, 006: 55.2] [002: 634.8]
440	01025	Cadmium (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 34.4] [002: 279]
023	01032	Chromium VI	(5)	(5)	⟨. 01 .mg/L	G	1/5 YR	[001,003, 004,005, 006: 880] [002: 1500]
442	01040	Copper (Dis.)	(5)	(5)	.008 mg/L	G	1/5 YR	[001,003, 004,005, 006: 2.32] [002: 26.68
405	01049	Lead (Dis.)	, (5)	(5)	<.001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 176] [002: 255]
444	71890	Mercury (Dis.)	(5)	(5)		G	1/5 YR	[001,002 004,005, 006: 1.0] [003: 1.68]
445	01065	Nickel (Dis.)	(5)	(5)	∠.005 mg/L	G	1/5 YR	[001,003, 004,005, 006: 60] [002: 249]
445	01145	Selenium (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	[001,003, 004,005, 006: 240] [002: 2130
447	01075	Silver (Dis.)	(5)	(5)	<.001 mg/L	G :	1/5 YR	[001,003, 004,005, 006: 1.84] [002: 21.16
448	01092	Zinc (Dis.)	: (5)	(5)	<.02 .mg/L	G	1/5 YŖ	[001,003, 004,005, 006: 76]

Manganesa (Dis)

.008 mg/L

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO.:

002

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE#	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE ^{(4) 109/1}			
PESTICIDES/PCB'S											
332	39330	Aldrin	608	0.05	<. 05 ug/L	3G	1/5 YR	NA			
333	39350	Chlordane	608	0.2	<1.0 ug/L	3G	1/5 YR	NA			
334	77969	Chlorpyrifos (Dursban)	622	(7)	<.1 ug/L	3G	1/5 YR	NA			
		DDD	608	0.1	<. 15 ug/L	3G	1/5 YR	NA			
		DDE	608	0.1	<.05 ug/L	3G	1/5 YR	NA			
335	39370	DDT	608	0.1	<.15 ug/L	3G	1/5 YR	NA			
336	39560	Demeton	(6)	(7)	< 2.0 ug/L	3G	1/5 YR	NA			
337	39380	Dieldrin	€08	0.1	√.05 · ug/L	3G	1/5 YR	NA			
		Endosulfan	608	0.1	₹.15 • ug/L	3G	1/5 YR	NA			
339	39390	Endrin	608	0.1	<.15 ug/L	3G	1/5 YR	NA			
340	39580	Guthion	622	(7)	₹ 20 mg/L	3G	1/5 YR	NA			
341	39410	Heptachlor	608	0.05	<.05 ug/L	3G	1/5 YR	NA			
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05.	<.04 ug/L	3G	1/5 YR	NA			
		Kepone	(6)	(7)	<2.0 ug/L	3 G	1/5 YR	NA			
343 .	39530	Malathion	(6)	(7)	<pre><2.0 ug/L</pre>	3G	1/5 YR	NA			
344	39480	Methoxychlor	(6)	(7)	<.40 ug/L	3G	1/5 YR	NA			
345	39755	Mirex	(6)	(7)	<.10 ug/L	3 G	1/5 YR	NA			
641		PCB-1242	608	1.0	<1.0 ug/L	3G	1/5 YR	N'A			
642		PCB-1254	608	1.0	<1.0 ug/L	3 G	1/5 YR	NA			
643		PCB-1221	608	1.0	√ 1.0 ug/L	3G	1/5 YR	NA			
644		PCB-1232	E08	1.0	<1.0 ug/L	3G	1/5 YR	NA			
645		PCB-1248	809	1.0	<1.0 ug/L	3G	1/5 YR	NA			
618	39508	PCB-1260	608	1.0	<1.0 ug/L	3G	1/5 YR	NA			
646		PCB-1016	608	1.0	<1.0 ug/L	3G	1/5 YR	NA			

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

DEQ PAR- AM#	EPA PAR- AM#	- CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE
349	39400	Toxaphene	608	5.0	<1.0 ug/L	3G	1/5 YR	NA
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	(.002 mg/L	3G	1/5 YR (PWS)	NA
•		BASE I	VEUTR	AL EXTR	ACTAE	LES		
F-C 19-		Acenaphthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	∠10.0 ug/L	3G	1/5 YR	NA
276	34526	Benzo(a)anthracene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
648		Benzo(b)fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0		3G	1/5 YR	NA
277	34247	Benzo(a)pyrene	625	10.0	<10.0 -ug/L	3G	1/5 YR	NA
		Butyl benzyl phthalate	625	10.0		3G	1/5 YR	NA
282	34320	Chrysene	625	10.0	<10.0 ug/L	3G	1/5 YR =	NA
654		Dibenz(a,h)anthracene	625	20.0	<10.0 ug/L	3G	1/5 YR	NA
		Dibutyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR =	NA
264	34566	1,3-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
266	34571	1,4-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		Diethyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
170		Di-2-Ethylhexyl Phthalate	625	10.0	<10.0 u⊵/L	3G	1/5 YR	NA
239 •	34611	2,4-Dinitrotoluene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
287	34376	Fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
288	34381	Fiuorene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
651		Indeno(1,2,3-cd)pyrene	625	20.0	<10.0 ug/L	3G	1/5 YR	NA
650		Isophorone	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
293	34595	Naphthalene	625	10.0	(10.0 ug/L	3G	1/5 YR	NA
296	34459	Pyrene	625	10.0	<10.0 ug/L	3G .	1/5 YR	NA
	i	1 2 / Trichlorobeczese	625	10.0	(10.0 ug/L	3 .20 .	1/E VO	NA



FACILITY NAME: Omega Prolein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO.: 002

DEQ PAR- AM#	•	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ^{S)}	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE
			V	DLATILES	Dough as the Toronto		P	
216	34030	Benzene	624	10.0	<pre>5.0 ug/L</pre>	G	1/5 YR	NA
484	32104	Bromoform	624	10.0	<5.0 ug/L	G	1/5 YR	NA
. 236	32102	Carbon Tetrachloride	624	10.0	√ 5.0 ug/L	G	1/5 YR	NA
652		Chlorodibromomethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
223	32106	Chloroform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
649		Dichloromethane	624	20.0	<5.0 ug/L	G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0	<pre><5.0 ug/L</pre>	G	1/5 YR	NA
260	34531	1,2-Dichloroethane	624	10.0	<5.0 ug/L	G	1/5 YR	NA
		1,1-Dichloroethylene	624	10.0		G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	<.5.0 ug/L	G	1/5 YR	NA
653		Monochlorobenzene	624	50.0	<5.0 ug/L	G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR	NA
222	34010	Toluene	624	10.0	<5.0 ug/L	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	<10.0 ug/L	G	1/5 YR	NA
		A	CIDS E	XTRACTA	BLES			3
	90	2-Chlorophenol	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		2,4 Dimethylphenol	625	10.0	<10.0 ug/L	3G	1/5 ¥R	NĀ
210	39032	Pentachlorophenol	625	50.0	<50.0 ug/L	3G	1/5 YR	NA
175	46000	Phenol ⁽²⁾	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
602	34621	2,4,6-Trichlorophenol	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
			MISC	ELLANEO	US		(8)	
039	00610	Ammonia as NH3-N	350.1	200	48.3 mg/L	· · · c	1/5 YR	NA
005	50060	Chlorine, Total Residual	(6)	100	_	G	1/5 YR	NA
					(.01,			

335.2

10.0

FACILITY NAME:

Omega Protein

ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

OUTFALL NO.:

002

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL(1)	RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽²⁾	SPECIFIC TARGET VALUE
· Anna		Fecal Coliform N/CML)	(6)	(7)	500 MPN/100 ML	G	1/5 YR	NA
137	00900	Hardness (as mg/l CaCO ₃)	(6)	(7)	10 ng/L	С	1/5 YR	NA
137	00000	Hydrogen Sulfide	(6)	(7)	01.0 mg/L	G	1/5 YR	NA
Ė		Nitrate (as mg/l N)	(6)	(7)	19.1 mg/L	С	1/5 YR	NA.
350	30340	Tributlytin ⁽⁹⁾	NSB 85-3295	(7)	<.50 ug/L	С	1/5 YR if believed present by permittee	NA
252	81551	Xylenes (total)	SW 846 Method 8020	(7)	<.10 ug/L	G	1/5 YR	NA

Graham Lyell Jett	General Manager	
Name of Principal Exec. Officer or Authorized Agent /	Title	
Alsohain Lucol Vet	3/13/02	15
Signature of Principal Officer or Authorized Agent /	Date	

I certify under penalty of law that this document and at attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the Information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

			7					24
DEQ PAR- AM#	PAR	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ^{(*}	REPORT- ING RESULTS	SAM-PLE TYPE ^[2]	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE
	Prince secure de	v.		METALS	W			
		Antimony (Dis.)	(5)	(5)	√.005 mg/L mg/L mg/L mg/L mg/L mg/L mg/L	G	1/5 YR	129000 all outfalls
		Arsenic III (Dis.)	(5)	(5)	<.05 mg/L	G	1/5 YR	[001,003, 004,005, 006: 55.2] [002: 634.8]
440	01025	Cadmium (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 34.4] [002: 279]
023	01032	Chromium VI	(5)	(5)	<.01 .mg/L	G	1/5 YR	[001,003, 004,005, 006: 880] [002: 1500]
442	01040	Copper (Dis.)	(5)	(5)	.008 mg/L	G	1/5 YR	[001,003, 004,005, 006: 2.32] [002: 26.68]
405	01049	Lead (Dis.)	(5)	(5)	<.001 mg/L	G	1/5 YR	[001,003, 004,005, 006: 176] [002: 255]
444	71890	Mercury (Dis.)	(5)	(5)	∠.0002 ·mg/L	G	1/5 YR	[001,002 004,005, 006: 1.0] [003: 1.68]
445	01065	Nickel (Dis.)	(5)	(5)	∠.005 mg/L	G	1/5 YR	[001,003, 004,005, 006: 60] [002: 249]
445	01145	Setenium (Dis.)	(5)	(5)	<.005 mg/L	G	1/5 YR	[001,003, 004,005, 006: 240] [002: 2130]
447	01075	Silver (Dis.)	(5)	(5)	<.001 mg/L ∴	G :	1/5 YR	[001,003, 004,005, 006: 1.84] [002: 21.16]
448	01092	Zinc (Dis.)	÷ (5)	(5)	<.02 mg/L	G.	1/5 YR	[001,003, 004,005, 006: 76]

FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

DEQ PAR- AM#	PAR- PAR- CHEM		EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ^{IV}	REPORT- ING RESULTS	SAM-PLE TYPE ²³	SAMPLE FRE- QUENCY ⁽¹⁾	SPECIFIC TARGET VALUE
			PEST	CIDES/PC	CB'S	(m) N		
332	39330	Aldrin	608	0.05	₹. 05 ug/L	3G	1/5 YR	NA
333	39350	Chlordane	608	0.2	<1.0 ug/L	3G	1/5 YR	NA
334	77969	Chlorpyrifos (Dursban)	622	(7)	ر.1 ug/L	3G	1/5 YR	NA
		DDD	608	0.1	<. 15 ug/L	3G	1/5 YR	NA
		DDE	608	0.1	<.05 ug/.L	3G	1/5 YR	NA
335	39370	DDT	608	0.1	<.15 ug/L	3G	1/5 YR	NA
336	39560	Demeton	(6)	(7)	< 2.0 ug/L	3G	1/5 YR	NA
337	39380	Dieldrin	608	0.1	√.05 · ug/L	3G	1/5 YR	NA
		Endosulían	608	0.1	√.15 ug/L	3G	1/5 YR	NA
339	39390	Endrin	608	0.1	<.15 ug/L	3G	1/5 YR	NA
340	39580	Guthion	622	(7)	√20 mg/L	3G	1/5 YR	NA
341	39410	Heptachlor	608	0.05	<.05 ug/L	3G	1/5 YR	NA
342	77835	Hexachlorocyclohexane (Lindane)	608	0.05	<.04 ug/L	3G	1/5 YR	NA
		Kepone	(6)	(7)	⟨2.0 ug/L	3G	1/5 YR	NA
343 .	39530	Malathion	(6)	(7)	(2.0 ug/L	3G	1/5 YR	NA
344	39480	Methoxychlor	- (6)	(7)	<.40 ug/L	3G	1/5 YR	NA
345	39755	Mirex	(6)	(7)	<.10 ug/L	3G	1/5 YR	NA
641		PCB-1242	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
642		PCB-1254	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
643		PCB-1221	608	1.0	ζ1.0 ug/L	3G	1/5 YR	NA
644		PCB-1232	€08	1.0	<1.0 ug/L	3G	1/5 YR	NA
645		PCB-1248	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
618	39508	PCB-1260	608	1.0	<1.0 ug/L	3G	1/5 YR	NA
646		PCB-1016	608	1.0	<1.0 ug/L	3G	1/5 YR	NA

FACILITY NAME: Omega Protein
ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO.: VA0003867

DEQ PAR- AM#	EPA PAR- AM#		EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ^{II}	RESULTS	SAM-PLE TYPE ^{:2)}	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET, VALUE
349	39400	Toxaphene	608	5.0	<1.0 ug/L	3G	1/5 YR	NA
647		2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	(6)	(7)	(.002 mg/L	3G	1/5 YR (PWS)	NA
		BASE I	NEUTR	AL EXTR	ACTAE	BLES		
		Acenaphthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
275	34222	Anthracene	625	10.0	∠10.0 ug/L	3G	1/5 YR	NA
276	34526	Benzo(a)anthracene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA.
648		Benzo(b)fluoranthene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
278	34242	Benzo(k)fluoranthene	625	10.0	< 10.0 ug/L	3G	1/5 YR	NA
277	34247	Benzo(a)pyrene	625	10.0	<10.0 'ug/L	3G	1/5 YR	NA
		Butyl benzyl phthalate	625	10.0	<pre>/10.0 ug/L</pre>	3G	1/5 YR	NA
282	34320	Chrysene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
654		Dibenz(a,h)anlhracene	625	20.0	<10.0 ug/L	3G	1/5 YR	NA
		Dibutyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
259	34536	1,2-Dichlorobenzene	625	10.0,	<10.0 ug/L	3G	1/5 YR	NA
264	34566	1,3-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
266	34571	1,4-Dichlorobenzene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		Diethyl phthalate	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
170		Di-2-Ethylhexyl Phthalate	625	10.0	<pre>< 10.0 ug/L</pre>	3G	1/5 YR	NA
239	34611	2,4-Dinitrotoluene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
287	34376	Fluoranthene	625	10.0	(10.0 ug/L	3G	1/5 YR	NA
228	34381	Fluorene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
651		Indeno(1,2,3-cd)pyrene	625	20.0	<10.0 ug/L	3G	1/5 YR	NA
650		Isophorone	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
293	34695	Naphthalene	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
296	34459	Pyrene	625	10.0	<10.0 ug/L	3G .	1/5 YR	NA
		1 2 4 Trichlorobserses	675	100	ug/L <10.0 ug/L	20 -	AIE VO	NA:



FACILITY NAME: Omega Protein ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

VA0003867

3,		***************************************				÷		2
DEQ PAR- AM#	PAR-	CHEMICAL	EPA ANAL- YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET VALUE(4) UP
			V	OLATILES				
216	34030	Benzene	624	10.0	< 5.0 ug/L	G	1/5 YR	NA NA
484	32104	Bromoform	624	10.0	<5.0 ug/L	G	1/5 YR	NA
235	32102	Carbon Tetrachloride	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
652		Chlorodibromomethane	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
223	32106	Chloroform	624	10.0	< 5.0 ug/L	G	1/5 YR	NA
649		Dichloromethane	624	20.0	<5.0 ug/L	G	1/5 YR	NA
244	79603	Dichlorobromomethane	624	20.0	√5.0 ug/L	G	1/5 YR	NA
260	34531	1,2-Dichloroethane	624	10.0	<5.0 ug/L	G	1/5 YR	NA
		1,1-Dichloroethylene	624	10.0	≤ 5.0 ug/L	G	1/5 YR	NA
172	34371	Ethylbenzene	624	10.0	<.5.0 ug/L	G	1/5 YR	NA
653		Monochlorobenzene	624	50.0	<5.0 ug/L	G	1/5 YR	NA
220	34475	Tetrachloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR	NA
222	34010	Toluene	624	10.0	<5.0 ug/L	G	1/5 YR	NA
155	39180	Trichloroethylene	624	10.0	<5.0 ug/L	G	1/5 YR	NA
173	39175	Vinyl Chloride	624	10.0	<10.0 ug/L	G	1/5 YR	NA
		A	CIDS E	XTRACTA	BLES			
		2-Chlorophenol	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
		2,4 Dichlorophenol	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
	-	2,4 Dimethylphenol	625	10,0	(10.0 ug/L	3G	1/5 ¥R	NA
210	39032	Pentachlorophenol	625	50.0	<50.0 ug/L	3G	1/5 YR	NA
175	46000	Phenol ⁽⁸⁾	625	10.0	ζ10.0 ug/L	3G	1/5 YR	NA
€02	34521	2,4,6-Trichlorophenol	625	10.0	<10.0 ug/L	3G	1/5 YR	NA
			MISCI	ELLANEO	US			
039	C0610	Ammonia as NH3-N	350.1	200	48.3 mg/L	С	1/5 YR	NA
C05	50060	Chlorine, Total Residual	(6)	100		G	1/5 YR	NA
018	C0720	Cyanide	335.2	10.0	(.01 mg/L	G	1/5 YR	NA

FACILITY NAME:

Omega Protein

ADDRESS: P.O. Box 125, Reedville, Va. 22539

PERMIT NO .:

....

VA0003867

OUTFALL NO .:

002

DEQ PAR- AM#	EPA PAR- AM#	CHEMICAL	EPA ANAL• YSIS NO.	QUANTIFI- CATION LEVEL ⁽¹⁾	REPORT- ING RESULTS	SAM-PLE TYPE ⁽²⁾	SAMPLE FRE- QUENCY ⁽³⁾	SPECIFIC TARGET
		Fecal Coliform N/CML)	(6)	(7)	500 空N/100 ML	G	1/5 YR	NA
137	00900	Hardness (as mg/l CaCO ₃)	(6)	(7)	10 mg/L	С	1/5 YR	NA
		Hydrogen Sulfide	(6)	(7)	<1.0 mg/L	G	1/5 YR	NA
		Nitrate (as mg/I N)	(6)	(7)	19.1 mg/L	С	1/5 YR	NA .
350	30340	Tributlytin ^{re)}	NSB 85-3295	(7)	<.50 ug/L	С	1/5 YR if believed present by permittee	NA
252	81551	Xylenes (total)	SW 846 Method 8020	(7)	(.10. ug/L	G	1/5 YR	NA

Graham Lyell Jett	General Manager	
Name of Principal Exec. Officer or Authorized Agent /	Title	
Graham Leel Dist	3/13/02	
Signature of Principal Officer or Authorized Agent /	Date/	

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. §1001 and 33 U.S.C. §1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum imprisonment of between 6 months and 5 years.)

Omega Protein-Reedville Cockrell Creek Sampling Results for Cyanide

	Omega	Reedville	Between	
	Intake	End of	Omega &	Type of
Date	Scrubbers	Mainstreet	Ampro	Sample
5/9/02	0.02			
8/12/02	BDL	BDL	BDL	water
8/13/02	0.1			sludge
8/19/02		0.01	0.03	water
8/26/02		0.02	0.03	water
9/3/02		0.44	0.79	water
9/9/02		BDL	BDL	water
9/16/02		BDL	BDL	water
				7-1

Notes:

- 1) Sampling is performed on Mondays in an effort to remove any influence of the discharge from Omega's processing. Omega usually completes processing for the week on Saturdays. Thus, by Monday, the Creek would have had two days to flush itself out by tidal action without any Omega discharges.
- 2) The sample taken on Tuesday September 3 was the day after Labor day (Omega did not fish on Labor Day)—there likely was a lot of boat traffic on Cockrell Creek on Labor Day that might have agitated the bottom sludges.

TOXICITY TESTS FOR OMEGA PROTEIN

Submitted to:

Mr. Lyell Jett Omega Protein P.O. Box 175 Reedville, VA 22539

Prepared by:

Biological Monitoring, Inc. 1800 Kraft Drive, Suite 101 Blacksburg, VA 24060

Phone: 540-953-2821 Fax: 540-951-1481 www.biomon.com

August 5, 2002

The following data have been internally reviewed and the personnel meticulously followed the methods. The procedures are deemed to be compliant with the methods and acceptable for reporting.

Anthony Smith (Laboratory Manager)

BIULUGICAL MUNITURING, INC. **Toxicity Test Condition Summary**

Client: Omega Protein

Prepared by: Anthony Smith

NPDES Permit #: VA0003867

Experiment ID#: OMP072402-2

Test Organism: Mysidopsis bahia

Test Type: Static Acute

Creanism Age at Start of Test: 3 d

Sample Tested: Outfall 002

Sample Type: Composite

Sample Collection Frequency and Dates and Times: From 07/22/02 @ 0700 to 07/23/02 @ 0700

Sample Collector: J.R. Hall

Delivered by: UPS

No. of Organisms per Replicate: 5

Feeding Regime: 2x daily

Test Volume: 400 mL

Test Duration: 48 h

Time: 1535

Time: 1522

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 072302

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 4

Feeding prior to test: Normal

Chamber Size: 800 mL PP

Photo Period: 16h light/8h dark

Start of Test: Date: 07/24/02

End of Test: Date: 07/26/02

Equipment:

pH Meter: SA 720 (A) DO Meter: YSI 58 (b)

SCT Meter: YSI 33 (A)

°C Measurement: Calibrated Thermometer

Salinity: SCT Meter

Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Preshwater and Marine Organisms. EPA/600/4-90/027F.

Gra Con	b: ollection posite:	n Date	45 7/2)	/ 7	Time: _3	282	Samp	<u>Te</u> Sp	ecies: M	n <u>ism:</u> fysidop I-8 S	rsis bal												8 L 35 12. lelf#: [<u>ر</u> د
Con.	Test Cont.	Νι	mber o	f Live	Organis	sms	D	issolve	d Oxyge	en (mg	/L)			ρН				Sa	dinity 0	/00	1		Tem	perature	e (°C)	
mg/L		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	d	24	48	77	04
0	A	5	5	5			66	5.6	56			7-9	29	7.8			25		25	1-1-	1	26	26		72	96
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Recorded By: The Ban

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BIOLOGICAL MONITORING , INC. Toxicity Test Procedure Check Sheet

	Toxicity Test Procedure Check Sheet			Page of		
Test LD. #: OMP 072402-2	Test containers used:	PP	Specify below	no. milliliters (mLs)	of diluent and	
No. of replicates per concentration:	-{	efflu	ent measured out per conce	ntration in this test:		
Are all test chambers properly labeled? Yes		Concentration mg/L Other	Diluent	Effluent	Total	
Specify vessel type and volume used to measure and deliver effluent and diluent to test chambers:		0	1700	0	1700	
		100	0	1700	1700	
graduated cylinder (s): 2000 pipet (s	s):					
volumetric flask (s):other						
Total vessel capacity: 800 ~ C Test solution volume: 400 ~ C Water Depth Constant: Cyclic:	20.01	Aeration Pretest: None: Slow: Moderate: Vigorous:	V	Screened Animal Not used: Used: Photoperiod: 8h/16h: Other:	- 	
Conditions of surviving organisms at end of test	Normal					
Methods of randomization employed: Rand	m#					
Comments: Organisms @ 27 ppt Salinated Sample to 25	upa arrival					

BIOLOGICAL MONITORING, INC. LABORATORY WORK ORDER

Project Manager: A. Smith	Date: 7/17/02
Assigned to:	Test Start Date: 7/24/02
Client: Omego Protein	Client's P.O.#:
Test ID#: OMP 072402 - 2	BMI Project #:3273
Test Description: 54Mb	Test Prefix: OMP
Test Conditions (Circle Appropriate Choice)	
Organism: P.p., D.p., D.m., C.d., M.b., C.v., H.a., Ct	Toxicant: Outfull 002 Permit No.#: VA 0003817
Duration: 24h, 78h, 96h, 7d, 3 brood Renew at: 24h, 48h, 96h, daily, none,	Test Vol: 200 ml Chamber: 200 ml
Concentrations: [0, 6.25, 12.5, 25, 50, 100%]	IWC:
Replicates: 1, 2, 3 (2) 8, 10 Diluent: MHRW, Surface, Synthetic Seawager	Other:
Temperature: $12 \pm 1^{\circ}$ C, $20 \pm 1^{\circ}$ C, $23 \pm 1^{\circ}$ C, $23 \pm 1^{\circ}$ C Test Salinity: Freshwater, 13 ppt, 20 pp	*
Feeding: 1 x daily, 2 x daily, 3 x daily, none, as specified	
Dechlorination Sample: Yes (No (Circle One) pH Adjustment to be done: Yes (No/IF necessary	·
Extra Controls:	
Special Conditions: Concurrent ORT	alint sample if
Comments:	meelson

```
OMP072402-2
```

File: omp072402 Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

D = 0.043

W = 0.706

Critical W (P = 0.05) (n = 8) = 0.818Critical W (P = 0.01) (n = 8) = 0.749

Data FAIL normality test. Try another transformation.

Warning - The F-test of homogeneity is sensitive to non-normal data and should not be performed.

TITLE: OMP072402-2 FILE: omp072402

TRANSFORM: NO TRANSFORM

NUMBER OF GROUPS: 2

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE	
-					
1	0	1	1.0000	1.0000	
1	0	2	1.0000	1.0000	ě
1	0	3	1.0000	1.0000	0
1	0	4	1.0000	1.0000	
2	100	1	0.8000	0.8000	
2	100	2	1.0000	1.0000	
2	100	3	1.0000	1.0000	
2	100	4	1.0000	1.0000	

OMP072402-2

File: omp072402 Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP	IDENTIFICATION	N	MIN	MAX	MEAN	
ĭ	0	4	1.000	1.000	1.000	
2	100	4	0.800	1.000	0.950	

OMP072402-2

File: omp072402 Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

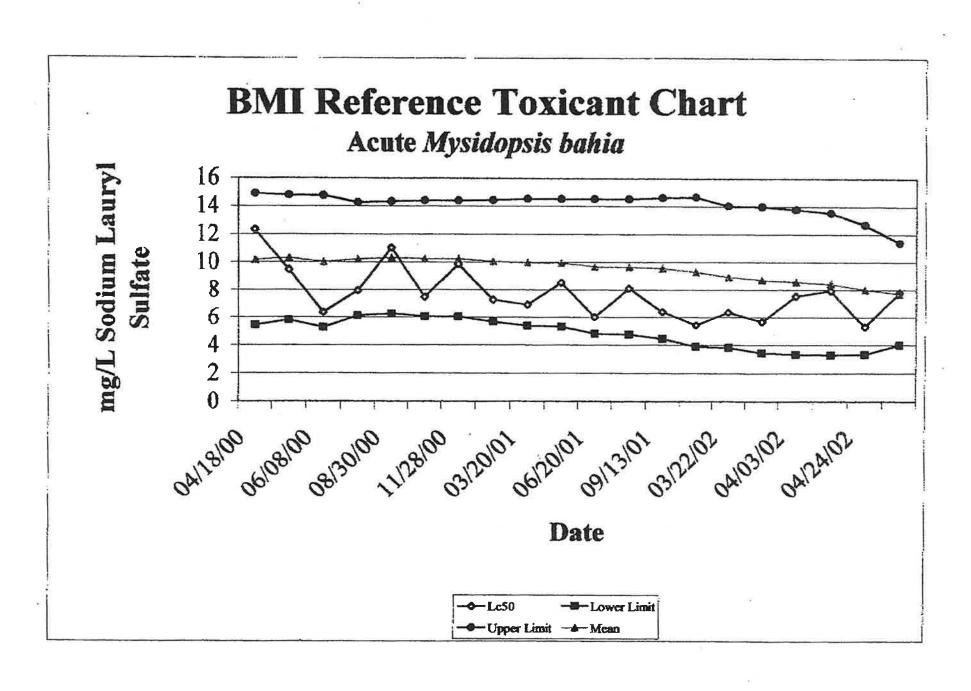
GRP	IDENTIFICATION	VARIANCE	\$D	SEM	C.V. %	
1	0	0.000	0.000	0.000	0.00	
2	100	0.010	0.100	0.050	10.53	
0.0427272						

OMP072402-2

File: omp072402 Transform: NO TRANSFORM

	STEEL'S MANY-ONE F	RANK TEST		Ho:Control <treatment< th=""></treatment<>				
GROUP	I DENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG		
1 2	0 100	1.000 0.950	16.00	11.00	4.00			

To be completed by the person collecting the sample. See reverse side for instructions. 1. Client name_(7) HoteIN 5. Purchase order no.... 6. Affiliation 2. Sempler's name oscharge 7. HPDES permit no. Mounty Northumberland Co 3. Sample agurce 8. Test period for which data is being submitted: 4. Out:sil/station Hose 17-23-00000 Hosewoodby: Authory). 2 9. Sample relinquished by: Date:Received by: Sample relinquished by: Description of Sampling Methods and Equipment Composite > 10. Type of sample collected: Composite type Continous Grab_ from 7-22-02 (date) Collection period: Date collected 710M (time) Time collected (date) 7-23-02 Volume (time) 14, No. of subsamples, 41,600 11. Flow during sampling 12. Type of container 1- gal- plas Tre 15. Frequency____ 16. Volume Condition of Effluent at Time of Collection 17. pH 84 18. Chlorine 20, is the sample: Chlorinated 19. Temperature: Dechlorinated At collection point in collection device (comp. sample must be @ or below 4°C) Unknown Dechlorination method Shipping Information 21. Method of shipment UPS 22. Date shipped 7-23-02 23. Time Approx 2: pm 24. Was the sample packed with ice for shipment? VES Date 7-23- OL 25. Custody seal in place by John A. Hall Instructions to Lab 26. Type of test(s) to be performed 27. Should BMI dechlorinate the sample (Yes or No) 28. Should ammonia be measured? (Yes or No) 23. Comments_ 30. I certify that the above information is correct Signature For BMI Use Only AR LA Hard VA BMI Sample ID# OMP, 57291127 Received by limeago Upon emivel at BMI: Custody seal Conductivity 16 000 Visual description Che Sample refrigerated UES Test ID number(s) (MPO72402-1





1800 Kraft Drive, Suite 101 · Blacksburg, VA 24060 · Tel 540-953-2821 · Fax 540-951-1481 Visit Our Website: www.biomon.com

This Transmission Is Confidential

(FACSIMI	LE TRANSMITTAL	LSHEET
Company:	ise Muss DED	<u>~</u>	Pages (Inc. Cover):
Phone Number	// //	- 1485	
Fax Number:	804 433	(710)	RE:
□ Urgent	□ For Review	☐ Please Reply	☐ Hard Copy To Follow
COMMENT	Si Omega	Repo	n+
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Gra Cor Cor	te Type b: ollection nposite; ollected ollected	Date:	Date:	7/22/0	L_ Tim	te: <u>07</u>	000	Spi Soi Bai		ABS (77240			Test M	Tes Tes	Start End I t Temp	Date: Date: Date: Vater Us	7/24/ 1/26/ 25\$	02 1=c		Time: Time: Waterb	/5) ath/Sh	35		r <u> </u>	` c
Con.	Test Cont.	Nu	umber o	f Live	Organis	sons	Di	issolve	d Oxyg	en (mg	rL)			pН				Sa	linity 0	/00			Temp	crature	(°C)	
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	B	5	3	3			40	2.6	4.5			6-7	164	1.8		<u> </u>	25	4	25			26	26	эÇ		\longrightarrow

Age L	Cont.	Ni	ımber (of Live	Organis	ins	D	issolve	d Oxygo	en (mg	/L)			pН			_	Si	climity 0	nity 0/00 Te			Tem	Temperature (°C)		
		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
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	B	5	5	5																			90			
	C	5	5	3																		26	-			
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BIOLOGICAL MONITORING, INC. Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Anthony Smith

NPDES Permit #: VA0003867

Experiment ID#: OMP072402-2

Test Organism: Mysidopsis bahia

Test Type: Static Acute

Organism Age at Start of Test: 3 d

Sample Tested: Outfall 002

Sample Type: Composite

Sample Collection Frequency and Dates and Times: From 07/22/02 @ 0700 to 07/23/02 @ 0700

Sample Collector: J.R. Hall

Delivered by: UPS

No. of Organisms per Replicate: 5

Test Solution Renewal Frequency: N/A

Dilution Water Used: Synthetic Seawater 072302

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 4

Feeding Regime: 2x daily Feeding prior to test: Normal

Chamber Size: 800 mL PP Test Volume: 400 mL

Photo Period: 16h light/8h dark

Test Duration: 48 h

Start of Test: Date: 07/24/02 Time: 1535

End of Test: Date: 07/26/02 Time: 1522

Equipment:

pH Meter: SA 720 (A) DO Meter: YSI 58 (b) SCT Meter; YSI 33 (A)

°C Measurement: Calibrated Thermometer

Salinity: SCT Meter

Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

Permit No. VA0003867 Part I Page 14 of 25

ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY BMP Compliance Report

Address: Reedville, Va.	* · · · · · · · · · · · · · · · · · · ·
VPDES Permit No.: VA0003867	
Report Period: From 6 19 102 To 6115	<u>102</u>
Paint Area	COMPLIANCE / NONCOMPLIANCE * (check as appropriate)
हें । । । । । । । । । । । । । । । । । । । 	
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*Comments on Noncompliance	41
Name of Principal Exec. Officer or Authorized	d Agent / Title
in accordance with a system designed to information submitted. Based on my inquiry directly responsible for gathering the information true, accurate and complete. I am aware including the possibility of fine and imprison	at and all attachments were prepared under my direction or supervision assure that qualified personnel properly gather and evaluate the of the person or persons who manage the system or those persons on, the information submitted is to the best of my knowledge and belief that there are significant penalties for submitting false information, ment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 these statutes may include fines up to \$10,000 and or maximum

imprisonment of between 6 months and 5 years).

Signature of Principal Officer or Amnorized Agent / Date

TOXICITY TESTS FOR OMEGA PROTEIN

Submitted to:

Mr. Lyell Jett Omega Protein P.O. Box 175 Reedville, VA 22539

Prepared by:

Biological Monitoring, Inc. 1800 Kraft Drive, Suite 101 Blacksburg, VA 24060

Phone: 540-953-2821 Fax: 540-951-1481 www.biomon.com

August 5, 2002

The following data have been internally reviewed and the personnel meticulously followed the methods. The procedures are deemed to be compliant with the methods and acceptable for reporting.

Ministry Smith (Laboratory Manager)

To be completed by the person collecting the sample. See reverse side for instructions. 5. Purchase order no._ 1. Client name_ 8. Affiliation 2. Sampler's name scharge 7. NPDES pomits no County Northumberland Co 3. Sample source B. Test period for which data is being submitted: 4. Outfail/station cold 17.23-30 sto Accord by: (Muthough). J 9. Sample relinquished by: Detestaceived by: Semple relinquished by: Description of Sampling Methods and Equipment Composite L 10. Type of sample collected: Composite type Continous Grab. from 7-22-02 (date) Collection period: Date collected (time) 710M Time collected_ (date) 7-23-02 Valume_ 7! am (gime) 14. No. of subsamples 11. Flow during sampling 11 600
12. Type of container 1- gal- plas 1
13. Number of containers shipped 15. Frequency___ 16. Volume Condition of Effluent at Time of Collection 20, is the sample: 18. Chlorine Chlorinated Dechlorinated At collection point In collection device (comp. sample must be @ or below 4°C Unknown Dechlorination method Shipping Information 22, Date shipped 7-23-02 23, Time Acorox 21. Method of shipment UPS 24. Was the sample packed with ice for shipment? 25. Cultivady seel in place by John A Instructions to Lab 26. Type of test(s) to be performed 27, Should BMI dechlorinate the sample (Yes or No) ____ 28. Should ammonia be measured? (Yes or No)____ 29. Comments 30. I certify that the above information is correct. Signature For BMI Use Only Alk 1/4 Hard Uh SMI Sample ID# OMP DLYNZT Received by indaw Custody seal Upon arrival at BMI: Conductivity 16 000 Visual description Cles Sample refrigerated USS Test ID number(s) AMP 072402-1

SAMPLE CULLECTION - CHART OF COURSE

TITLE: OMP072402-2 FILE: omp072402

TRANSFORM: NO TRANSFORM

NUMBER OF GROUPS: 2

GRP	1DENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	1.0000	1.0000
1	0.	2	1.0000	1.0000
1	0	3	1.0000	1.0000
1	0	4	1.0000	1.0000
2	100	1	0.8000	0.8000
2	100	2	1.0000	1.0000
2	100	3	1.0000	1.0000
2	100	4	1.0000	1.0000

OMP072402-2

File: omp072402

Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP		N	MIN	MAX	MEAN	
1	0 ×	4	1.000	1.000	1,000	
2	100	4	0.800	1.000	0.950	

OMP072402-2

File: omp072402 Transform: NO TRANSFORM

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
1	0	0.000	0.000	0.000	0.00
2	100	0.010	0.100	0.050	10.53

OMP072402-2

File: omp072402

Transform: NO TRANSFORM

	STEEL'S MANY-ONE	RANK TEST	_	- Ho: Control <treatment< th=""></treatment<>						
GROUP	IDENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG				
1	0	1.000				9				
2	100	0.950	16.00	11.00	4.00					

OMP072402-2

File: omp072402 Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Wilk's test for normality

Shapiro - with a rest for normality

D = 0.043

W = 0.706

Critical W (P = 0.05) (n = 8) = 0.818 Critical W (P = 0.01) (n = 8) = 0.749

Data FAIL normality test. Try another transformation.

Warning - The F-test of homogeneity is sensitive to non-normal data and should not be performed.

BIOLOGICAL MONITORING, INC. Toxicity Test Procedure Check Sheet

Page _

Test I.D. #: 0MP 072402-2	Test containers use	ed: PP		Specify below	ao. milliliters (mLs	c) of diluent and
No. of replicates per concentration:	Ц	31 31 31	effluer	nt measured out per conce	ntration in this test	·
Are all test chambers properly labeled?		Concent mg/L	Other	Diluent	Effluent	Total
Control of the second	4 4 4 7 8 8 8	0		1700	0	1700
Specify vessel type and volume used to me and diluent to test chambers:	asure and deliver effluent	100	>	0	1700	/70%
graduated cylinder (s): Lost pi	pet (s):					
volumetric flask (s):o	other					
Total Chlorine of sample upon arrival (mg/ Total Chlorine of sample after dechlorination Pretest treatment for organisms: Norm Exposure Chamber Total vessel capacity: 800-4 Test solution volume: 400-4 Water Depth Constant: Cyclic:	Feeding schedule Pretest feeding: Not fed: Fed daily: 2× Fed irregularly (describe)	None: USlow: Moderate: Vigorous:		Screened Anima Not used: Used: Photoperiod: 8h/16h: Other:	
	Type of food: 1:00 1:05	ar herin	_ Beginning: _	(hour)		
Conditions of surviving organisms at end of	f test: Ner mad					
Methods of randomization employed: 2	infom#					
Comments: Organisms @ 27 PI	et upm arrival					
Salinated Sample to	25 ppt					
277	5) (4			*		

ACUTE TEST DATA REVIEW CHECKLIST

	Number VA (803X) Outfall (10) (0 Permittee Oroginal Control of C		
Test Da	Period Reviewed: QT SA AN 1st 2nd 3rd 4	Other_ th	
Testing	Laboratory BMI		
#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
1.	Was the test performed as per schedule?	,	
2.	Was the correct test performed?		
3.	Was the correct type of sample used?	1	
4.	Were pH) temp. Cl of sample checked at sample site (or within 15 minutes of sample retrieval)?	-/-	gje site (a
5.	Was the sample packed in ice and chilled to ≤4° C for transport? NOTE: Frozen samples are not valid!		7 4 C .
6.	Were pH, DO, Cl, temperature and sample description recorded upon receipt?		
7.	Does description (visual, scent) of sample (when received at lab) seem typical for this type of facility?		
8.	Was the test initiated within 36 hours of sample retrieval from sampler?		indle rest
9.	 a. Was the sample DO ≥ 4.0 mg/l and ≤ saturation at 25° C prior to test initiation? (applies to D. ulex, C. dubia, M. bahia, P. promelas, C. variegatus) b. Was the sample DO ≥ 6.0 mg/l and ≤ saturation at 12° C prior to test initiation? (applies to O. tykiss) 		egunis)
10.	If 9 is "NO", was the DO adjusted to the acceptable range (see a. and b. above) prior to test initiation?	NA	
11:	If the sample had a chlorine residual, was it dechlorinated?	NA	
12.	Did the permit allow for dechlorination of the sample? (Only if it contains a compliance schedule for CI limit or for dechlorination)	NA)*
13.	If the sample was dechlorinated, were controls treated with the same amount of dechlorination agent and run with untreated controls? (determines adverse effect of agent)	NA	
14.	Was the sample pH within the 6.0 - 9.0 range?	/	
15.	Was the age of the organisms in the correct range at test initiation? a. P. prometas and C. variegatus - 1-14 days old, within 24 hours of age of each other b. O. mykiss - 15-30 days old c. D. pulex and C. dubia - <24 hours old d. M. bahia - 1-5 days old, within 24 hours of age of each other	_	
16.	Were 5 geometric test concentrations (preferably 0.5 series) and 1 control set up?		
17.	Was the test chamber size acceptable? a. P. promelas, C. variegatus, M. bahia - 250 ml minimum b. O. mykiss - 5000 ml minimum c. D. pulex and C. dubia - 30 ml minimum	/	
18.	Was the sample volume acceptable? a. P. promelas, C. variegatus, M. bahia - 200 ml minimum b. O. mykiss - 4000 ml minimum c. D. pulex - 25 ml minimum	/	

	С	HRONIC						ITY TEST	WITH M	YSIDOP	SIS BAH	IA	1
Day of te Date	est	DAY 0	DAY 1	T	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7	FEMALE WITH EGGS	FEMALE NO EGGS	MALE	NOT MATURE
CONC:	A		-					1	1				
	В	1						1					
8	C				7								
	D											7	1
	E												
	F								<u> </u>				
	G			7		Ť ·	i		1				
	Н					İ		1					
Totals	\vdash	T		1	i	1							
CONC:	A					1							
1,8 h	В							4				,	
rie.	C												
	D												
	E												\$11-11
	F												
	G									100			
	Н									N			
otals													
CONC:	A												
	В												
	C												
	D					ļ.							
	E						1						ļ
	F			(27)									
	G												
	Н						l l						
Totals								1	1				
CONC:	Α												
	В											A SERVICE ASSESSMENT	
	C		24-21										
	D												
	E												
	F						1		1				
	G												
	Н												
Totals													
CH/TIME													
					L		l			<u></u>			

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO		
	d. C. dubia - 15 ml minimum				
19.	Was the minimum number of replicates per concentration represented? a. 2 replicates P. promelas, O. mykiss C. variegatus, M. bahia b. 4 replicates - D. pulex, C. dubia	_			
20.	Was the minimum number of organisms in each replicate? a. 10 organisms - P. promelas, O. mykiss C. variegatus, M. bahia b. 5 organisms - D. pulex, C. dubia				
21.	a. Was the dilution water synthetic moderately hard water or 20% DMW? (applies to freshwater pecies P. promelas, O. mykiss, D. pulex, C. dubia) b. Was the dilution water synthetic moderately hard water or 20% DMW that had been adjusted to 20 2 ppt, or the same salinity as the receiving water? (applies to salt water species, C. variegatus, M. bahia)				
22.	Was the dilution water hardness within the 80-100 mg CaCO _y L?	WA			
23.	Was the dilution water hardness within the 60-70 mg CaCO ₃ /L?	NA			
24.	Was the dilution water pH within the range of 7.4 – 7.8 (7.9 – 8.3 for mineral water)?				
25.	a. Was the test temperature 25±1° C upon initiation, and throughout the test? (applies to P. romelas, D. pulex, C. dubia C. variegatus, M. bahia) b. Was the test temperature 12±1° C upon initiation, and throughout the test? (applies to O. lykiss)				
26.	Was the temperature measured daily in one replicate of each concentration?	\checkmark	6		
27.	Was the DO measured daily in one replicate of each concentration? (Exceptions to this requirement are for tests using D. pulex or C. dubia, where the 24-hr DO reading can be omitted to prevent organism stress.)	/			
28.	If the DO dropped to <4.0 mg/l, was aeration initiated? (Exceptions to this requirement are for tests using D. pulex or C. dubia, where aeration is impractical.) all acrased at 24 hr who looks to be the second of	m4			
29.	If aeration was necessary (and acceptable), were all test chambers aerated for the duration of the test, and the time at which aeration was initiated recorded?				
30.	If aeration was necessary (and acceptable), was it applied at a maximum rate of 100 bubbles/minute so as not to cause injury to the organisms?		They		
31.	Was pH measured at the beginning and end of the test (daily) is optimal) for a 48-hour test, or at 0, 48 hours, after renewal, and at 96 hours for a 96-hour test in one replicate of each sample concentration?				
32.	a. For a freshwater test, was conductivity measured at the beginning and end (also at renewal for 96-our tests) of the test in one replicate of each concentration? (applies to freshwater species P. promelas, O. pykiss, D. pulex, C. dubia) b. For a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour ests) of the test in one replicate of each concentration? (applies to salt water species, C. variegatus, M. ahia)				
33.	For freshwater tests, was the alkalinity measured in 100% effluent and the control at the beginning of the test?	NA	0.7		
34.	For freshwater tests, was the hardness measured in 100% effluent and the control at the beginning of the test?	NA			
35.	a. For a test using Mysidopsis bahia, were the mysids fed Artemia nauplii daily? b. For a 96-hour test using either Pimephales promelas or Cyprinodon variegatus, were the larvae ed prior to sample renewal at 48 hours?	VA			
36.	For a 96-hour test using either Pimephales promelas or Cyprinodon variegatus, was the sample used for	NA	*		

· Gr

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	renewal the original sample?		
37.	Was the daily photoperiod 16 hours light/8 hours dark?		
38.	Were the surviving organisms counted daily in all test chambers?	_	
39.	Was the test terminated at 48±1 hours (less than 47 hours invalidates the test) or 96±1 hours (less than 95 hours invalidates the test)?	_	
40.	Was the percent survival in each concentration recorded at the end of the test?	_	
41.	Was the percent survival in the controls ≥90%?	_	
42.	Was the LC 50 correctly determined? none due to lack of month offy		
43.	If the acute test was run in conjunction with a chronic test using the same species, was the acute test initiated with the second or third sample pulled for the chronic test? (Any sample other than the same sample used to initiate the chronic test is acceptable.)	~	

Items in bold type (and shaded) are significant in that if they are answered "NO", the test is automatically deemed "not acceptable" and must be repeated to fulfill permit TMP requirements. Bold type items are numbers 3, 5, 8, 12, 15, 25, 26, and 41.

RESPONSE GUIDE

1 8.	Response should be "YES" or note the problem in the review	ज्याच ल्य
9 10.	If 9. is "NO", then 10. must be "YES" or the test is not acceptable	" then 10"
11 13.	If 11. is "YES", then 12. and 13. must be "YES" or the test is not acc	eptable -
14 17.	If 14. is "NO", then 15., 16. and 17 must be "YES" or the test is not a	acceptable
18 43.	Response should be "YES" or note the problem in the review	•

RATING

NOT ACCEPTABLE

Comments

and grint 50.6 mg

CHRONIC TEST DATA REVIEW CHECKLIST

Permit N	Tumber VAND 3867 Outfall 006 Permittee OMIGA		
	-t Date 4/26/02 - 7/3/02 Period Reviewed: QT SA AN O	ther	
Testing l	Laboratory BMI		
#	CHRONIC DATA PARAMETERS - (Some are organism specific)	YES	NO
1.	Was the test performed as per schedule?		i i
2.	Was the correct test performed?		
3.	Was the correct type of sample collected at each sampling event?	-,-	
4.	Was a minimum of 3 samples collected?		geð.
5.	We'e pH comp, Cl of sample checked at sample site (or within 15 minutes of sample retrieval) for each sample?		
6.	Was each sample packed in ice and chilled to ≤4° C for transport? NOTE: Frozen samples are not valid!	/	
7.	Were pH, DO, Cl, temperature and sample description recorded upon receipt of each sample?		
8.	Does the description (visual, scent) of each sample (when received at lab) seem typical for this type of facility?		
9.	Was the test initiated within 36 hours of sample retrieval from sampler? Was the first use of a sample for renewal within 36 hours?	/	* 10
10.	Was the last use of the sample within 72 hours of retrieval from the sample device?		
11.	 a. Was the sample DO ≥ 4.0 mg/l and ≤ saturation at 25° C prior to test initiation? (applies to C. dubia and P. promelas) b. Was the sample DO ≥ 6.0 mg/l and ≤ saturation at 25° C prior to test initiation? (applies to C. variegatus and M. bahia) 	/	
12.	If "11." is "NO", was the DO adjusted to the acceptable range (see a., and b. above) prior to test initiation?	VSO	ne
13.	If the sample had a chlorine residual, was it dechlorinated?	NA	
14.	Did the permit allow for dechlorination of the sample? (Only if it contains a compliance schedule for a chlorine limit or for dechlorination)	NA	
15.	If the sample was dechlorinated, were controls treated with the same amount of dechlorination agent and run with untreated controls? (This determines any adverse effect of the dechlorination agent.)	NA	
16.	Was each sample pH within the 6.0 - 9.0 range?		
17.	Was the age of the organisms in the correct range at test initiation? a. P. promelas and C. variegajus - 24 hours old (24-48 hours old is acceptable if the organisms were shipped in from an outside source) c. C. dubia - <24 hours old, within 8 hours of age of each other		*
	d. M. bahia - 7 days old, within 24 hours of age of each other		
18.	Was a minimum of 5 geometric test concentrations and 1 control set up?		
19.	Was the test chamber size acceptable? a. P. promelas - 500 ml minimum b. C. variegatus - 300-1000 ml (200)		(9/) (1 84)

#	CHRONIC DATA PARAMETERS - (Some are organism specific)	YES	NO
	c. M. bahia - 400 ml d. C. dubia - 30 ml minimum		
20.	Was the sample volume acceptable? a. P. promelas - 250 ml minimum b. C. variegatus - 250-750 ml 300 ml c. M. bahia - 150 ml d. C. dubia - 15 ml minimum	_	78
21.	Was the minimum number of replicates per concentration represented? a. 3 replicates (4 preferred) - P. promelas, C. variegatus b. 8 replicates - M. bahia c. 10 replicates - C. dubia	_	
22.	Was the minimum number of organisms in each replicate? a. 10 organisms - P. promelas, C. variegatus, b. 5 organisms - M. bahia c. 1 organism - C. dubia		
23.	 a. Was the dilution water synthetic moderately hard water or 20% DMW? (applies to freshwater species P. promelas, C. dubia) b. Was the dilution water synthetic moderately hard water or 20% DMW that had been adjusted to 20 ± 2 ppl, or the same salinity as the receiving water? (applies to salt water species, C. variegatus, M. bahia) 	V	स्वयम्बर्धः - १
24.	Freshwater - Was the dilution water hardness within the 80-100 mg CaCO ₃ /L?	NA	
25.	Freshwater - Was the dilution water hardness within the 60-70 mg CaCO _y /L?	NA	
26.	Freshwater - Was the dilution water pH within the range of 7.4 - 7.8 (7.9 - 8.3 for mineral water)?	NA	
27.	Saltwater - was the salinity 20±2 ppt?	V	
28.	 a. Was the test temperature 25±1° C upon initiation, and throughout the test (applies to P. equal promelas, C. dubia and C. variegatus)? b. Was the test temperature 26±1° C upon initiation, and throughout the test (applies to M. bahia)? 	re 35±1° 1	iggo) ei
29.	Was the temperature measured daily in one replicate of each concentration?	/	
30.	Was the DO measured daily, before and after renewal in one replicate of each concentration?		
31.	 a. If the DO dropped to <4.0 mg/l in a test using P. promelas, was aeration initiated? For a test using C. dubia, a low DO sample should be aerated prior to test initiation or renewal, as aeration with the organisms present is impractical.) b. If the DO dropped to ≤6.0 mg/l in a saltwater test, was aeration initiated? 		V
32.	If aeration was necessary (and acceptable), were all test chambers aerated for the duration of the test, and the time at which aeration was initiated recorded? (Not applicable to tests using C. dubia)	NA	
33.	If aeration was necessary (and acceptable), was it applied at a maximum rate of 100 bubbles/minute so as not to cause injury to the organisms?	N4	
34.	Was pH measured at test initiation, and before and after sample renewal in one replicate of each concentration?	V	
35.	For salt water test using M. bahia, was ammonia and nitrite measured prior to renewal in one replicate of each concentration?	NA	
36.	 a. For a freshwater test, was conductivity measured at the beginning of each 24-hour period in one replicate of each concentration? (applies to freshwater species P. promelas. C. dubia) b. For a saltwater test, was the salinity measured at the beginning of each 24-hour period in one replicate of each concentration? (applies to salt water species, C. variegatus, M. bahia) 	/	

#	CHRONIC DATA PARAMETERS - (Some are organism specific)	YES	NO
37.	For freshwater tests, was the alkalinity measured in 100% effluent and the control at test initiation, and for each new sample?	NA	
38.	For freshwater tests, was the hardness measured in 100% effluent and the control at test initiation, and for each new sample?	AN	
39.	 a. For a test using Mysidopsis bahia, were the mysids fed Artemia nauplii (at a rate of 75/mysid) twice daily? b. For a test using Pimephales promelas, were the larvae fed 0.15 ml concentrated Artemia nauplii a minimum of twice daily? c. For a test using Cyprinodon variegatus, were the larvae fed Artemia nauplii once per day at a rate of 0.1 g (wet weight) for days 0-2, and 0.15 g (wet weight) for days 3-6? d. For a test using Ceriodaphnia dubia, were the organisms fed 0.1 ml YCT and 0.1 ml algae per day after renewal? 		_
40.	Was the sample data for the renewal days consistent with the data for the first use of that sample?		
41.	Was the daily photoperiod 16 hours light/S hours dark?	ja .	
42.	Were the surviving organisms counted daily in all test chambers?	restrict.	
43.	Were the number of young produced recorded daily for the C. dubia test?	1W4	İ
44.	Was the occurrence of males noted in the C. dubia test?	NA	
45.	Were the daily renewals of chronic test solutions performed no earlier or later than subsequent 24±2 hour periods from test initiation? 4/24 16/50, 56MPle USO 1045-1430		
46.	 a. For tests using P. promelas, C. variegatus, or M. bahia, was the test terminated 7 days (this is interpreted as 7 24-hour periods) and within ± 1 hour of the time of day at which it was initiated? b. For tests using C. dubia, was the test terminated when 60% or more of the surviving females in the controls had produced their third brood within 8 days? 	due-	
47.	Was the percent survival in each concentration recorded at the end of the test?		ě
48.	Was the percent survival in the controls ≥80%?		
49.	Did the test meet the additional acceptability criteria? a. P. promelas - For tests initiated with larvae ≤ 24 hours old, was the average dry weight of the control larvae surviving at the end of the test ≥ 0.25 mg? b. C. variegatus - For tests initiated with larvae ≤ 24 hours old, was the average dry weight of control larvae ≥ 0.60 mg (unpreserved), or ≥ 0.50 mg (preserved)? c. M. bahia - Was the average weight of the controls ≥ 0.20 mg? d. C. dubia - Did reproduction in the controls average 15 or more young per surviving female?	140	
50.	Were the data Arcsin transformed prior to statistical analysis (M. bahia - survival and growth, C. variegatus - survival, P. promelas - survival)?	./	
51.	Was the NOEC correctly determined using the appropriate statistical method?		
52.	Did the test result in a calculable NOEC (Result reported as "<" is not acceptable. Lower dilutions should have been added or the test rerun to determine the result.)		
53.	Was the IC25 reported for the test?		
54.	Was the LC ₅₀ at 48 hours reported for the test?		

Items in bold type (and shaded) are significant in that if they are answered "NO", the test is automatically invalidated and must be repeated to fulfill permit TMP requirements. Bold type items are numbers 3, 4, 6, 9, 10, 14, 17, 28, 29, 46, 48, and 49.

RESPONSE GUIDE

1. - 10. Response should be "YES" or note the problem in the review
11. - 12. If 11, is "NO", then 12, must be "YES" or the test is subject to invalidation
13. - 15. If 13, is "YES", then 14, and 15, must be "YES" or the test is subject to invalidation
20. - 54. Response should be "YES" or note the problem in the review

RESULTS

ACCEPTABLE NOT ACCEPTABLE

COMMENTS:

BIOLOGICAL MONITORING, INC. Toxicity Test Condition Summary

Client: Omeg Protein

NPDES Perm t#: VA0003867

Experiment II #: OMP062802-3

Test Organism Cyprinodon variegams

Test Type: Str tic Acute

Organism Age at Start of Test: 3 d

Sample Tested Outfall 006

Sample Type: Composite

Sample Collection Frequency and Dates and Times: From 06/26/02 @ 0700 to 06/27/02 @ 0700

Sample Collect vr. J.R. Hall

Test Solution F mewal Frequency: N/A

Dilution Water Jsed: Synthetic Seawater 062502

Test Temperatu e: 25 ± 1°C

No. of Replicat s per conc.: 2

Feeding prior to test: Normal

Chamber Size: 100 mL PP

Photo Period: 1 ih light/8h dark

Start of Test: D. te: 06/28/02

End of Test: Da e: 06/30/02

Equipment:

pH Meta : SA 720 (A) DO Met r: YSI 58 (b) SCT Me a::YSI 33 (A)

°C Meas rement: Calibrated Thermometer

Salinity: \$CT Meter

Chlorine Fisher/Porter Amperometric Titrator

Prepared by: Anthony Smith



No. of Organisms per Replicate: 10

Feeding Regime: Not fed

Test Volume: 350 mL

Delivered by: UPS

Test Duration: 48 h

Time: 1610

Time: 1536

Test Method Ref. rence: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

Acute Toxicity Test Data Summary

Clic at	Omega Protein	NPDES PERMIT #		4: VA.0003867		
Test Or ;anism	Cyprinodon variegatus		Date	Time		
Experi nent	OMP062802-3	Start Test	06/28/02	1610		
Sample [ested	Outfall 006	End Test	06/30/02	1536		

RESULTS

			istry Analyses nge)		
Conc.	Temp. (°C)	D.O. (mg/L)	Rq	Salinity (ppt)	Surrival (t) 48 h
0 6.25 12.3 25 50 100	25-26 25-26 25-26 25-26 25-26 25-26	5.9-6.7 5.6-5.5 5.6-6.4 5.4-6.4 4.8-6.3 3.6-6.3	7.9-8.0 7.8-8.0 7.7-8.0 7.8-9.0 7.7-8.0 7.7-8.0	20-21 20-21 20 20 19	1.20 1.20 1.10 9.0 1.10

STATISTICAL ANALYSES

Test Met	10d	LC50 (%)	95% Fiducial (Confidence) Limits
N/A		N/A	N/A

mposite	ample entaine pe; D rab: [: Fron	er:ate ar Date:_ n: Dat	P. e	Por	Tim	יים ביים ביים ביים ביים ביים ביים ביים	Time:		o: Da	TE:		Num Dilut Test	Office D.y- ober o tion V Tem	or: of Organ Vater U	nisms sed: e:	per C Su 25	oncent	ration	5000 Septe	20	- Batc	n #_ <u>/</u> 1	ime:	Age: _ 502	37	- - - - - - - - - - - - - - - - - - -
St Mode	Test Cord		Numi	ber of	Live		LUCIT.	Diss		Охуд			-	Ηq	-	of Te	1		0/00	-		7		153g		-
	4	100		_	_	-	-	_	48		14	_	24		73	04	0	24	48	72	T _{II}	0	24	41	72	1
0	B	10	1	10		-	6.7	15.9	63	-		8.0	79	7.9			21	21	20		ļ	25	26	25		
6.25	A	10	10	10			6.5	5.8	63			79	7.7	8.0			20	21	20			25	26	25		L
12.5	A	10	10	10			10.4	5.6	64			7.9	7.7	7.0			20	20	20			25	26	25		
25	A B	10	9 10	9			6.2	5.4	64			7.9	78	80			20	20	20			25	26	25		
50	AB	0	10	48			5.4	4.9	6.3			7.9	7.7	8.0			19	19	101			25	×	25		L
100	A	10	10	10 9 10			4.2	36	6.3			79	7.6	8.0			19	19	19			25	24	25		
												_														
i		Med	7am	BA			0.01	Zfr	Pho			اسمو.	₹4n -	7,14	\exists		200		Rh				RAN			

• mg/L as CaCO,

* Acrosted @ 24 hrs.

BIOLOGICAL MONITORING, INC. Toxicity Test Procedure Check Sheet

"Concentration % mg/L other	Diluent(mLs)	Effluent(mLs)	Total(mLs)	Are all test chambers properly labeled?
0	800	0	860	Specify vessel type and volume used to measure and deliver effluen
6.25	750	50	Too	diluent to test chambers:
12.5	700	100	800	Graduated cylinder(s) 2000 1000 500 250
25	600	200	800	100502510
50	400	400	800	Volumetric flask(s) 1000 500 200 100
100		800	Xao	Pipet(s) 1051Other
90				Total Chlorine of sample upon arrival (mg/L) Total Chlorine of sample after dechlorination (mg/L)
posure Chamber		ng Schedule	Aeration ·	Total Chlorine of sample upon arrival (mg/L) Total Chlorine of sample after dechlorination (mg/L)
tal Vessel Capacity at Solution Volume	Sonal Pretes	t Feeding:	Aeration Protest:	Total Chlorine of sample upon arrival (mg/L) Total Chlorine of sample after dechlorination (mg/L) Screened Animal Enclosures Not Used: Value
tal Vessel Capacity at Solution Volume ater Depth Constant	SO hel Not for	t Feeding:diaily:	Aeration Pretest: None: Slow: (bubbles/min)	Total Chlorine of sample upon arrival (mg/L) Total Chlorine of sample after dechlorination (mg/L) Screened Animal Enclosures Not Used: Used: Used:
sposure Chamber stal Vessel Capacity ast Solution Volumes ater Depth Constant Cyclic:	SO hel Not for	t Feeding:	Aeration Pretest: None: Slow: Moderate:	Total Chlorine of sample upon arrival (mg/L) Fotal Chlorine of sample after dechlorination (mg/L) Screened Animal Enclosures Not Used: Used: Photoperiod: 16b/8h:
tal Vessel Capacity at Solution Volume ater Depth Constant	Protes SO had Not for Fod D	t Feeding:diaily:	Aeration Pretest: None: Slow: (bubbles/min) Moderate: Vigorous:	Total Chlorine of sample upon arrival (mg/L) Total Chlorine of sample after dechlorination (mg/L) Screened Animal Enclosures Not Used: Used: Photoperiod: 16h/8h: other:
tal Vessel Capacity st Solution Volumes ater Depth Constant Cyclic: nditions of surviving	Protes SO had Not for Fod D	of Food:	Aeration Pretest: None: Slow: Moderate:	Total Chlorine of sample upon arrival (mg/L) Total Chlorine of sample after dechlorination (mg/L) Screened Animal Enclosures Not Used: Used: Photoperiod: 16h/8h: other:

BIOLOGICAL MONITORING, INC. LABORATORY WORK ORDER

Project I fanager:	Date: 6/24/02
Assigned to:	Test Start Date: 6/26/02
Client: ()	Client's P.O.#;
Test ID# OMPO62802-3	BMI Project #: 3269
Test Des ription:	Test Prefix: OMP
Test Con litions (Circle Appropriate Choice)	
Cute/Chronic	0 10 11
(rganism: P.p., D.p., D.m., C.d., M.b., C.), H.a., Ct (ther:	Toxicant: Stall COK Permit No.#: VA000386-7
I uration: 24h, 48h, 96h, 7d, 3 brood F enew at: 24h, 48h, 96h, daily, none,	Test Vol: 350ml Chamber: 20ml
(oncentrations: 6, 6.25, 12.5, 25, 50, 100%] (ther:	IWC:
F splicates: 1, 3, 4, 8, 10 L iluent: MHRW, Surface, Synthetic Seawater	Other:
T mperature: $12 \pm 1^{\circ}$ C, $20 \pm 1^{\circ}$ C, $23 \pm 1^{\circ}$ C, $23 \pm 1^{\circ}$ C T st Salinity: Freshwater, 13 ppt, 20 ppt	
F eding: 1 x daily, 2 x daily, 3 x daily from as specified	
Dechlorination Sample: Yes (Circle One) p. I Adjustment to be done: Yes (ND) IF necessary	8
Extra Cor rols:	
Special C nditions: Salute Sangel	<u></u>
Comment :	

BIOLOGICAL MONITORING, INC. **Toxicity Test Condition Summary**

Client: Omeg Protein

Prepared by: Anthony Smith

NPDES Perm: :#: VA0003867

Experiment II 4: OMP062602-1

Test Organism Cyprinodon variegatus

Test Type: Short Term Chronic

Organism Age at Start of Test: < 24h

Sample Tested Outfall 006

Sample Type: Composite

Sample Collect on Frequency and Dates and Times: From 06/25/02 @ 0530 to 06/25/02 @ 0900; From 06/26/02 @

0700 to 06/27/02 @ 0700; From 06/28/02 @ 0700 to 06/29/02 @

0700

Sample Collect et J.R. Hall

Delivered by: J.R. Hall

No. of Organisms per Replicate: 10

Test Solution R mewal Frequency: Daily

Dilution Water Jsed: Synthetic Seawater 062502

Test Temperatu e: 25 ± 1℃

No. of Replicate 3 per conc.: 4

Feeding prior to test: Not fed Feeding Regime: 2x daily

Chamber Size: 1 00 mL PP

Test Volume: 300 mL

Photo Period: 1 ih light/8h dark

Test Duration: 7 d

Start of Test: Di le: 06/26/02 Time: 1615

End of Test: Da a: 07/03/02 Time: 1515

Equipment:

pH Mete: SA 720 (A) DO Met r. YSI 58 (b) SCT Me x:YSI 33 (A)

°C Meas rement: Calibrated Thermometer

Salinity: SCT Meter

Chlorine Fisher/Porter Amperometric Titrator

Test Method Refi rence: U.S. EPA. 1994. Short-Terms Methods for Estimating the Chronic Toxicity of Effluents and Receiving Water > Freshwater Organisms. EPA/600/4-91/002.

BIOLOGICAL MONITORING, INC. Chronic Toxicity Test Data Summary

Clie at	Omega Protein	NPDES PERMIT #: VA0003						
Test Or; anism	Cyprinodon variegatus		Date	Time				
Experi nent	OMP062602-1	Start Test	06/26/02	1615				
Sample ' 'ested	Outfall 006	End Test	07/03/02	1515				

RESULTS

		Wate	er Chemistry An (Range)	alyses	=01E 1.0	
Cono.	Temp. (°C)	D.O. (mg/L)	Eq.	Salinity (ppt)	Burvival (%) 96 h/7 d	liean Widght ing)
0	25-26	6.0-7.3	7.0-8.0	20-21	100/100	0.517
0.5	25-25	5.0-7.3	7.8-8.0	20-21	100/100	0.505
<u>, </u>	25-26	5.7-7.0	7.8-8.0	20-21	100/100	0 684
*	25-26	5.67.9	7.7-8.0	20-21	100/100	0.599
51	25-26	5.3-0.0	7.7-8.2	19-21	97.5/95	0 580
100	25-26	5.0-8.2	7.7-0.3	19-21	100/100	0 591

STATISTICAL ANALYSES

Test Met od		End Point	
Steel's Man / One Rank	Survival	NOEC = 100%	LOEC = N/A
Steel's Man One Rank	Growth	NOEC = 100%	LOEC = N/A

SURVIVAL I ATA

- 1. Arc Sine to asformation was used.
- 2. Data FAIL tormality test using Shapiro-Wilke's Test.
- 3. Data FAIL comogeneity test using Bartlett's Test.
- 4. Cyprinodon pariegatus survival in all the effluent concentrations was not significantly different the n survival in the control using Steel's Many One Rank Test (alpha=0.05).

GROWTH DI TA

- 1. No transfor nation was used.
- 2. Data FAIL I ormality test using Shapiro-Wilke's Test.
- 3. Data PASS tomogeneity test using Bartlett's Test.
- 4. Cyprinodon: ariegatus growth in all the effluent concentrations was not significantly different the a growth in the control using Steel's Many One Rank Test, (alpha=0.05).

Comments:

91	Sheepshe	ead M	innav	ر Cy) v	prino.	don v	ariega	atus) I	'atva fOTT	ug,	rnc vival	and (Grow	th She	x	Pag	<u>-</u> _	of_	4_
E eriment ID;	DMPOC	3602	1-1			(1/8u	17/6			0.0	(3.)		Cach.)	3	P				
fermit #: VAC	7038/H	ŀ		SE SE		before renewal (mg/L)	D.O. after renewal (mg/L)	_	p	Temp. before renewal ("C)) les		38	Nardness (mg/L as CaCO ₃)	Chambers cleaned/renewed				•
	A Z-AUA.			organi sas		rene	enek	pH before renewal	ewal	re Ten	Temp, after renewal	pt	Alkalinity (mg/L as	9/F &	paued.	:			
				ă A A		fore	ter	ē,	pH after renewal	efor	fter	Salinity (ppt)	ıtı	e) s	N CL	Ec j	2	30.00	w
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65	-5	10	10	10	10	5.9	6.2	7.3	58		25	21						- *	177
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- V-1.5	47		b	101	POL	0.4		19		110		20					I		140

Short-term Chronic Toxicity Test Conditions (Fish)

Permit A		A	000386	7_					
Experim	ent .	D.#	MP 06	1602-1	Biolog	ists Conducti	ing Test:		
Organism	n:	Cux	miest.	rs	3	Denes	A. Man	him	
Client:_	1) mero	Prote	415	QC Off	ficer:	15/		
Effluent '	Toxi :	ant: 🗘	utfull 00	6	Test Or	ganism Age:	E18 7	21/2	
Sample T	ype:	STAIL C	omposite				ABSOUL	avi	16
Renewal l	Freq	ency:	1x do	ile		ntainers Uses	,, ,	1 PP	
Test Temp	eral	re:	25±1°C			Schedule:		dail	
Dilution V	/atei	Used:	Synthe Tie	Semote		bertie	A	U	
			2 Time		Sample (Chlorine:	NA		
End of Tes	ĽD:	e:_7	2/02_Tim	ie: 1515	Test Volt	ume:2	me	per repliente	
Template #	:	molom	#				. /	- sagrene	
		iample (COLLECTION		7		Dilu	ant Rately Challes are	
D	21c(t)		T	mc(s)	5.11			ent Batch Carboy #/Days Us	ed
Franc:	T	To:	From:	To:		PLE USB	· · · · · · · · · · · · · · · · · · ·	5500002 (OU)	2014
625/02	42	1/02	05:30	09:06	(6/2+/02	Time(s)	Test Day	1.	-1-1
062607	T			 		1330	0		
2/2/21	10%	TATION	07:00		6/27/02	1045	1_1_		
	1	C+ IIVF	0.120	0:700	6/28/02	1430	<u> </u>		
N. 12-10	<u> </u>	Tooling			6/29/02	1345	* 3		
78171/00	0	29103	07:00	0:700	6/30/00.	12:15	44		
					7/1/02/	1200	145		
	-			5	7/2/02	1145	6		
seast note 549	l-tmple	collection o	kronic) must be wronic test solution levice. End of Test:		renieval from the a not be used If more	The second of the least of the	o device. Samples name clapsed since		
				9) = 3 - 1					- ;
ernge weigl	it per	control	lish: 0 ,5	17 mg	Control	Survival (%):_ 100		
nments:		-							<u>s</u>
						4			<u>*</u> *
	neini								-
¥ A	1.1	31	. D ^			 		¥1	
MI /SOP 4	.2.	Dolor	e Romera	6.3		1			-:

BIOLOGICAL MONITORING, IN LABORATORY WORK ORDER	C.	Nº	11:177
Project 1 Ianager: H. Jmuth	Date: 6/2	1/02	
Assigned to:	Test Start Date:	6/26	102
Client: Meyor Farler	Client's P.O.#:		
Test ID# 0110062602-1	BMI Project #: _	3269	
Test Des ription:	Test Prefix:	MP	
Test Con litions (Circle Appropriate Choice)			
/ cute/Chronic			a
(rganism: P.p., D.p., D.m., C.d., M.b., C., H.a., Ct	Toxicant: Permit No.#:	Huli	03847
I uration: 24h, 48h, 96h, 3 brood F enew at: 24h, 48h, 96h, daily, none,	Test Vol:C	Dark	
incentrations: [0, 6.25, 12.5, 25, 50, 100%]	IWC:	337 - 337 - 14 11 - 141	¥
R splicates: 1, 2, 3 (2, 8, 10) L iluent: MHRW, Surface, Synthetic Seavater	Other:		
T mperature: $12 \pm 1^{\circ}$ C, $20 \pm 1^{\circ}$ C, $23 \pm 1^{\circ}$ C, $25 \pm 1^{\circ}$ C T st Salinity: Freshwater, 13 ppt, 20 pp		18	
F eding: 1 x daily, x daily, 3 x daily, none, as specified			
D :chlorination Sample: Yes/No (Circle One) p. i Adjustment to be done: Yes/No/IF necessary		Ţ	
Extra Cor rols:			-
Special Conditions: Salenali Sany	l		
Comment :			

Biological Monitoring, Inc. Weight Data Sheet

Page___ of ___

Test II No. Onl 062602-1 Test Dates: 6/26/02 Species: 6, vacional

or or Con entration	Length	Initial Weight (mg)	Final Weight (mg)	Diff. (mg)	# Larvae	Avg. W:. Larvao (mg)
CIA		55,73		4.25	10	0.425
()B	45.93	19.95	51.20	151-535.27	10	KST 0.527
CIC	- Antowillian Sales	49.32	54.61	5,29	W	0.529
() D		47.40	53.31	5.85	10	0.585
C.5A		53.25	58.62	5.37	10	0.537
053		54.93	61.03	6.10	10	0.610
050		54.15	59,58	5.43	10	0.543
0.5D		103.07	69.58	6.51	10	0.651
	•	52.23	59.30	7.07	10	707.0
13		46.94	53.98	7.04	10	0.704
10	7,	48.61	55.11	6.50	" 10	0.650
ID	-	46.80	53.54	6.74	10	0.674
i A		64.22	71.24	7.02	10	0,702
1.3		70.98	76.19	4.21	10	0.421
<u> </u>	1000	56.59	63.18	6.59	10	0.659
:_D	- WALLAND	55.57	61,71	6.14	10	0.614
51 A		51.24	88.22	6.98	10	0.698'
5/3		46.00	53.38	7.32	10	0.732
:5/6		50.34	57.43	7.09	20	0.709
.51 D		50.04	52.46	1.82	10	0.182
1204		32.73	37.55	4.82	10	0.482
1203		43.27		6,35	/0	0.635
1200		49.20		5.34	10	0.534
20.0		48.18	55.29	7.11	/0	0.711

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM
To be completed by the person collecting the sample. See reverse side for instructions.

1. Client no me OmeGA ProTEIN	5. Purchase order no	
2. Sampler's name ANDY HALL	6. Affiliation Production 1	ANAORE
3. Sample ource Direly	7. NPDES permit no./County	
4. Outfall/s stionOOO	8. Test period for which data is being submitted:	
9. Samplere inquished by: /	Date;Received by:/	Date
Samplere inquished by: foth Aleel	Date;Received by:	Date
Description of Sam 10. Type of sample collected: Grab Date collected	Topling Methods and Equipment Composite L Composite type	
Time collected	Collection period: from 6:38:	(time)
11. Flow du ing sampling 6. 973 93 0 12. Type of container 2 CAL PLASTIC 13. Number of containers shipped 2	14. No. of subsamples 15. Frequency 16. Volume	
Condition of Effi	fluent at Time of Collection	
17. pH 8:3 18. Chlorine 19. Tempers rure: At ci llection point clitch In co section device (comp. sample must be @	20. Is the sample: Chlorinated Dechlorinated Unknown Dechlorination method	
Shipp	ping Information	
21. Method if shipment 22. Date s 24. Was the sample packed with ice for shipment? 25. Custody: sai in place by	shipped 23. Time Approx 8 A Ves Date 6/89/02 Time	<u>m</u>
Instru	ructions to Lab	
26. Type of 1 st(s) to be performed 27. Should B /II dechlorinate the sample (Yes or No) 29. Commen's	28. Should ammonia be measured? (Yes or No)_	
30. I certify that the above information is	correct Signature Date	
Hard Sooo BMI Sample I-1#000068908 Received by Wat Upon arrival a BMI: Custody seal YES Tel	BMI Use Only	68
. soc to fidning (19)		

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM $10\,967$ To be completed by the person collecting the sample. See reverse side for instructions.

1. Client nan a OMEGA PROTEIN	5. Purchase order no
2. Sampler's name AIDY HALL	6. Affiliation PRODUCTION MANAGER
3. Sample sc srce DITCH	7. NPDES permit no./County
4. Outfall/sts ion 006	8. Test period for which data is being submitted:
9.Samplereli quished by:	Date Received by: Baupan & Mosky 6 1210 Date
Samplerell quishedby: John Aleel	/ Date:Received by: / Date
Description of S	Sampling Methods and Equipment
10. Type of temple collected:	Composite_X_
Grab	Composite type
Date collected	Collection period: from) ¢ 6-26-02(date
Time collected	N. J. Methodolic Committee
* Olollie	to 06/27/02 (date)
11. Flow during sampling 6,973,920	14. No. of subsamples (time)
12. Type of container 2 gal. plastic cont	ainers 15. Frequency
13. Number cf containers shipped 2	16. Volume
17. pH 8.40 18. Chlorine 19. Temperat ire: At col ection pointditch In coll ection device (comp. sample must be	20. Is the sample: Chlorinated Dechlorinated Unknown Dechlorination method
Sh	ripping Information
21. Method o shipment UPS 22. Da	te shipped 06/27/02 23. Time APPROX. 2:30 PM
24. Was the a imple packed with ice for shipment	yes
25. Custody si si in place by John Allel	Date 06/27/02 Time
. In	nstructions to Lab
26. Type of test(s) to be performed	No.
27. Should BN I dechlorinate the sample (Yes or N 29. Comments	o) 28. Should ammonia be measured? (Yes or No)
30. I certify that the above information	
*******************	Signature Date
AlkF	or BMI Usa Only
BMI Sample IE # OMPOLYON Received by	D. Naches Date C/28/02 Time 11:45
Upon arrival at BMI: Custody seal On ice?	Temperature 39 pH 7.26 Chlorine Color/L DO 66
Visual descript on Clear Fish Odor	Salinity 19pr Conductivity 14oct Sample refrigerated
	ocaroa - 3

SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions.

Client na 18 OMBON ProTE	5. Purchase order no	
2. Sampler's name ANDY HALL	6. Affillation PRODUCTION Mgr	
3. Sample s urce ditch	7. NPDES permit no./County	
4. Outfall/st tion OOCo	8. Test period for which data is being submitted:	
8. Samplerel rquishedby:	cell Dato; Received by: Benjam A Morly 16/2/02 Date	
Samplerel iquished by:		
Description 10. Type of sample collected: Grab	of Sampling Methods and Equipment Composite Composite Composite Composite type	
Date collected Time collected		
11. Flow during sampling 1, 726, 836 12. Type of ontainer 1 Gas. Pla 13. Number of containers shipped 1	G total A ten falmen	
Condition 17. pHS.51 18. Chlorine 19. Tempera ure: 19. To lection point D. To ly In col action device (comp. sample me	20. Is the sample: Chlorinated Dechlorinated Unknown Dechlorination method	
21. Method c 'shipment // 22. 24. Was the ample packed with ice for ship 25. Custody's relin place by A H	Shipping Information 2. Date shipped 1-25-02 23. Time Approx. 2:3c PM ment? yes Patol 1/35/02 Time	
Instructions to Lab		
28. Type of t st(s) to be performed		
30. I certify that the above inform		
Alk 92 Hard 3020	For BMI Use Only	
Upon arrival a BMI: Custody seal On ice?	Temperature AR pH & Chlorine Co. Olark DO 9.2	
Visual descrip on Char Odeless Test ID number(s) OMP 062602 - 1	Sallhity 1999 Conductivity 12008	

```
OMP062602-1
File: 062602s1
```

Transform: ARC SINE(SQUARE ROOT(Y))

Shapiro - Vilk's test for normality

) = 0.070

W = 0.435

Oritical W (P = 0.05) (n = 24) = 0.916 Critical W (P = 0.01) (n = 24) = 0.884

Data FAIL ::ormality test. Try another transformation.

/arning - The first three homogeneity tests are sensitive to non-normal data and should not be performed.

OMP062602-1 File: 0626)2s1

Transform: ARC SINE(SQUARE ROOT(Y))

Hartley's lest for homogeneity of variance Bartlett's test for homogeneity of variance

fhese two ests can not be performed because at least one group has zero variance.

Data FAIL o meet homogeneity of variance assumption. Additional transformations are useless.

TITLE:

OMP062602-1

FILE: 062602s1
TRANSFORM: ARC SINE(SQUARE ROOT(Y))

NUMBER OF GROUPS: 6

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE	
1	0	1	1.0000	1.4120	
1	0	2 3	1.0000	1.4120	- 50
Ł	0	3	1.0000	1.4120	
1	0	4	1.0000	1.4120	
2	0.5	4 1 2 3	1.0000	1.4120	
2	0.5	2	1.0000	1.4120	
2	0.5	3	1.0000	1.4120	
2	0.5	4	1.0000	1.4120	
3	1	1	1.0000	1.4120	
3	1	2	1.0000	1.4120	
3	. 1	2 3	1,0000	1.4120	
2 2 2 2 3 3 3 3 4 4	1	4	1.0000	1.4120	
4	2		1.0000	1.4120	
Ä	2	2	1.0000	1.4120	
4	2 2 2 2 2	1 2 3 4	1.0000	1.4120	
	$\overline{2}$	4	1.0000		
5	51	ī	1.0000	1.4120	
5	51	1 2	1.0000	41.4120	
5	51	3		1.4120	
5	51		1.0000	1.4120	
D D		4	0.8000	1.1071	
5	100	Ţ	1.0000	1.4120	
455556666	100	2	1.0000	1.4120	
5	100	3	1.0000	1.4120	
3	100	4	1.0000	1.4120	

OMP062602-1

File: 062(02s1 Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

GRP IDENT	IFICATION	N	MIN	MAX	MEAN
1	n	4	1.412	1 410	4 410
$\hat{2}$	0.5	4	1.412	1.412 1.412	$\begin{array}{c} 1.412 \\ 1.412 \end{array}$
3	1	4	1.412	1.412	1.412
4	2	4	1.412	1.412	1.412
5	51	4	1.107	1.412	1.336
6	100	4	1.412	1.412	1.412

OMP062602-

711e: 0626 2s1 Transform: ARC SINE(SQUARE ROOT(Y))

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %	Ď
1 2 3 4 5 6	0.5 1 2 51 100	0.000 0.000 0.000 0.000 0.023 0.000	0.000 0.000 0.000 0.000 0.152 0.000	0.000 0.000 0.000 0.000 0.076	0.00 0.00 0.00 0.00 11.41 0.00	я

OMP062602~1

File: 0626)2s1 Transform: ARC SINE(SQUARE ROOT(Y))

STEEL'S MANY-ONE RANK TEST - Ho:Control<Treatment

GROUP	I)ENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	d f	SIG
1	0	1.412				
2	0.5	1.412	18.00	10.00	4.00	
3	1	1.412	18.00	10.00	4.00	
4	2	1.412	18.00	10.00	4.00	
5	51	1.336	16.00	10.00	4.00	
6	100	1.412	18.00	10.00	4.00	

Critical values use k = 5, are 1 tailed, and alpha = 0.05

OMP062602-: 711e: 0626 2g1

Transform: NO TRANSFORMATION

Shapiro - '/ilk's test for normality

0.34 وز

/ = 0.61 1

Critical W (P = 0.05) (n = 24) = 0.916 Critical W (P = 0.01) (n = 24) = 0.884

Data FAIL formality test. Try another transformation.

Warning - The first three homogeneity tests are sensitive to non-normal data and should not be performed.

MP062602-L

File: 0626)2g1 Transform: NO TRANSFORMATION

partlett's test for homogeneity of variance Calculated B1 statistic = 14.71

Table Chi-:quare value = 15.09 (alpha = 0.01, df = 5) able Chi-:quare value = 11.07 (alpha = 0.05, df = 5)

Data PASS | 1 homogeneity test at 0.01 level. Continue analysis.

MP062602-1 File: 062602g1

Transform: NO TRANSFORMATION

SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

RP	IDENTI FICATION	N	MIN	MAX	MEAN	
			~~~			
1	0	4	0.425	0.585	0.517	
2	0.5	4	0.537	0.651	0.585	
3	1	4	0.650	0.707	0.684	
A	2	4	0.421	0.702	0.599	2
5	51	4	0.182	0.732	0.580	
ñ	100	4	0.482	0.711	0.591	

OMP062602-1

ile: 06260: g1

Transform: NO TRANSFORMATION

HUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

GRP	IDENTI TCATION	VARIANCE	SD	SEM	C.V. %
1	0	0.004	0.067	0.033	12.91
2	0.5	0.003	0.055	0.027	9.38
3	1	0.001	0.027	0.013	3.95
1	2	0.015	0.124	0.062	20.70
5	51	0.071	0.266	0.133	45.82
6	100	0.010	0.102	0.051	17.34

TITLE: OMP062602-1
FILE: 062602g1
TRANSFORM: NO TRANSFORMATION

NUMBER OF GROUPS: 6

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE	
1	0	1	0.4250	0.4250	
1	0	2	0.5270	0.5270	
1 *	0	2 3	0.5290	0.5290	2/
1	0		0.5850	0.5850	
2	0,5	4 1 2 3	0.5370	0.5370	
2	0.5	2	0.6100	0.6100	
2	0.5	3	0.5430	0.5430	
2	0.5		0.6510	0.6510	
3	1	1	0.7070	0.7070	
3	ī	2	0.7040	0.7040	
3	$\overline{1}$	4 1 2 3	0.6500	0.6590	
3	1		0.6740	0.6740	
_4 ⊡	$ar{\hat{\mathbf{z}}}$	4 1 2 3	0.7020	0.7020	
Ä	2 2 2 2	2	0.4210	0.4210	
	2	ā	0.6590		
	2	4	0.6140	0.6590	
74 E	51	ī	0.6980	0.6140	
5	51	9		0.6980	
<b>∂</b>	51	<b>2</b> 3	0.7320	0.7320	
G G		4	0.7090	0.7090	
5	51	4	0.1820	0.1820	
5	100	Ţ	0.4820	0.4820	
6	100	<b>2</b> 3	0.6350	0.6350	
222233334444555556665	100		0.5340	0.5340	
5	100	4	0.7110	0.7110	
			~~~~~~~~~~~~~~~~	~	

JMP062602-:
File: 0626(2g1

Transform: NO TRANSFORMATION

STEEL'S MANY-ONE RANK TEST

Ho: Control < Treatment

ROUP	II ENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG
					~~~~	
1	0	0.517				
2	0.5	0.585	24.00	10.00	4.00	
3	1	0.684	26.00	10.00	4.00	
4	2	0.599	22.00	10.00	4.00	
5	51	0.580	22.00	10.00	4.00	
6	100	0.591	22.00	10.00	4.00	

Critical values use k = 5, are 1 tailed, and alpha = 0.05

#### BIOLOGICAL MONITORING, INC. Toxicity Test Condition Summary

Client: Ome ga Protein

Prepared by: Anthony Smith

NPDES Pen ut #: N/A

Experiment D#: RT062702-1

Test Organis n: Cypinodon variegatus

Test Type: I tatic Acute Reference Toxicant

Organism A₁ e at Start of Test: 2 d

Sample Test: I: Sodium Lauryl Sulfate

Sample Type Product

Sample Prep: ration Dates and Times: 06/27/02 @ 0920

Sample Propired by: A. Smith

Delivered by: N/A

Test Solution Renewal Frequency: N/A

Dilution Wat r Used: Synthetic Scawater 062502

Test Tempera ure: 25 ± 1°C

No. of Replic ites per conc.: 2

No. of Organisms per Replicate: 10

Feeding prior to test: Normal

Test Volume: 400 mL

Chamber Size 800 mL PP

Test Duration: 48 h

Feeding Regime: Not fed

Photo Period; 16h light/8h dark

Time: 1517

Start of Test: Date: 06/27/02

-----

End of Test: 1 late: 06/29/02

Time: 1423

Equipment:

pH M ter: SA 720 (A) DO M ster: YSI 58 (b) SCT Meter: YSI 33 (A)

°C Mr Isurement: Calibrated Thermometer

Salinit r: SCT Moter

Chlori ie: Fisher/Porter Amperometric Titrator

Test Method F aference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving; Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

## BIOLOGICAL MONITORING, INC. Acute Toxicity Test Data Summary

Cl ent	Omega Protein	NPDES PERMIT #: N/A							
Test O ganism	Cyprinodon variegatus		Date	Time					
Expe iment	RT091301-1	Start Test	06/27/02	1517					
Sample Tested	Sodium Lauryl Sulfate	End Test	06/29/02	1423					

## RESULTS

	Water Chemistry Analyses (Range)												
Cono.	Temp. (°C)	D.O. (mg/L)	ph	Salinity (ppt)	Survi'ia (%) 48 li								
0	25-26	6.0-7.4	7.9-8.0	1.0	100								
1.25	25-26	5.6-7.5	7-8-8.0	19	65								
2.5	2.5	4.9-7.5	7.7-7.9	19	, i								
5	25	4.7-7.4	7.6-7.9	19									
10	25	4,4-7.5	7.6-7.9	19	,								
20	25	4,2-7.3	7.5-7.9	19									

## STATISTICAL ANALYSES

Test Mi thod	LC50 (ppm)	95% Fiducial (Confidence) Limits
Trimmed S _l earman- Karb :r	1.467	N/A

Experi	men	没	A	To	627	02	- {		NP	DES P		0.0		16	5 T		980	_		: :	B	mlan	_A	1	chino		
Client		וע	W.				1.			<del>-</del>			ac	Office	r:	-	K	7						-	Chigo 2502 Age: _5		-
Sampl	IDS2	mpie;	. 7		/_17	711-	- 47			•			=	C		peuro	نمر ٠٠		nego	44	Urg	. patc	n r_A	<u> </u>	2502		
Sampl	. Tv	ne: D:	te an	d Tim	e of	Collec	Tion:			1			Num	iber o	Organ	isms	per Co	oncen	างมีกา	_	20	_	V	unc_	10e: _5	2D	<u>-2</u>
	, .	ah. E	7770			COME	, uuri	سم	poor	a ol			Dilu	uon W	ater U	sed:	$\mathcal{L}$	062	502			Batc	h #: 1	1220	la 21e	·879	
Compo	site:	Fron	n: Dat	t:		Tim	c:		1	o: Dat	te:		Tim	re:	DELACOR	Star	t of T	est. [	later	<u> </u>	7017		-	42200	יום,	-	
Test M	iode:					Test	Dur	ation:					_			End	of Te	st:	Date: 7	د کرد محدد کرد	TON TONA		1	me:_	142	7	÷
. Я		Test	1	Numb													-	7	0.500				<del>~</del>		17-		— —
-		Core	-		รถ นา เลา					mg/L)	Охуд	en			pΗ			S	linity	0/00			1	Lewbe	rature	[°C]	
			0	34	41	72	04	0	24	45	72	15		24	41	72	24	<b>-</b>	24	40	71	64	<b>\</b>	24	44	72	14
	2	A	10	10	_			7.4	10.0	6.1			79	8.0	79			19	19	19	-		25				-
-		3	10		10														1				1	- A-	00		
ĮŁ.	र्भ	A		10	4		_	7.5	5.8	5.6			7.9	8.0	7.8			19	19	19			25	25	26		
	5	5			9	_	-	=	110				_					_									
1	-21	B	10	2		-	-	7.5	4.9	-			7.9	7.7				19	19	_			25	25	-		
-	5	A	10	8	-	-	-	24	4.7	4		-	70	7.				-	-			<u> </u>					
		B	10	0	-		<del> </del>	7.	7.7				7.1	7.60				19	101	_		<del> </del>	25	25			
	0	A	10	0	-			7.5	44	-			29	7.6		-	~	19	. 0.	_		<del> </del>	105	05			-
		В	10	0	-				42					7.0				1	-			-	7.5	25	$\dashv$		
12	0	£	_	0	-			7.3		-			79	7.5	-			19	19	~		i	25	25	-		
-		В_	10	0	_																			42			
-	$\dashv$						-		_																		
-	1						-	-								-1					1						
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1																						-					
1-			77,	_																							
_ n.	Lorded	By:	B4-	MX				MAS	m	M			MA	MKS	M/			MOS	MX	54		il	124	CAN	SWY		

## BIOLOGICAL MONITORING, INC.

		Toxicit	y Test Procedure Check	Sheet Page_of_
Test I.D.#:	1	Permit # NA	Tast Containers Head	72
Specify below volu	me of diluent and effi	uent measured out per cor	acentration in this test:	
'Concentration % mg/L other	Diluent(mLs)	Effluent(mLs)	Total(mLs)	Are all test chambers properly labeled?
0	1000	0	1 /000 11	Specify vessel type and volume used to measure and deliver effluent and
1.25	987.5	12.5	1 1000	diluent to test chambers:  Graduated cytinder(s) 2000 1000 500 250
2.5	975	25	1000	Graduated cylinder(s) 2000 1000 500 250 10
5	950	50	1000	Volumetric flask(s) 1000 500 200 100
10	900		1000	Pipet(s) 10 5 1 Other
20	<b>300</b>	200	1000	Specify material (s) used to place test organisms into test
(a				otal Chlorine of sample upon arrival (mg/L)
Exposure Chamber Total Vessel Capacity Test Solution Volume: Water Depth Constant	- COm Protes		Aeration Pretest: None: (bubbles/min)	Screened Animal Enclosures Not Used: Used: Photoperiod: Organism pretest treatment Normal
Cyclie:_	Fod in	regularly (describe)	Moderate:	16b/8h:
	Trans	of Food:	Vigorous:	other:
Conditions of survivin	a organisms at end of to		Beginning:(hour)	a gr
	ation employed: R			
Comments:				
			Y.,	

## BIOLOGICAL MONITORING, INC. SUMMARY OF TEST STOCK SOLUTION PREPARATION

Client: BMI .	
Test ID : los. RT 062702 - 1	
STOCK A - MAS	STER STOCK SOLUTION
10 #: RT062702-	•
Compound Type: Sody	8 11 511
Weight of Compound:	10397-
Diluent Type: Squaller	a Seawater
Volume of Diluent (units):	muls
Final Concentration:	
Prepared By: Dange	A. Machin
Date/Time: 002705	0920/
Substock 4 - ID #	Substock A - ID #
Vi lume of Stock A:	Volume of Stock A:
Di uent Type:	
Velume of Diluent:	Volume of Diluent:
Fi al Concentration:	Final Concentration:
Pr pared By:	PreparedBy:
Da e/Time:	Date/Time:
Substock ID #	Substock A - ID#
Vo ume of Stock A:	Volume of Stock A:
Dil lent Type:	DiluentType:
Vo ame of Diluent:	Volume of Diluent;
Fin 1 Concentration:	Final Concentration:
Prc ared By:	Prepared By:
Dat /Time:	Date/Time:

#### SPEARMAN-KARBER

TRIM:

35,00% 1.467

LC50:

95% CONFIDENCE LIMITS ARE UNRELIABLE.

C NC.	number Exposed	number Dead	PERCENT DEAD	BINOMIAL PROB. (%)
1.25	20.	7.	35.00	.1316D+02
2.50	20.	20.	100.00	.9537b-04
5.00	20.	20.	100.00	.9537p-04
0.00	20.	20.	100.00	.9537D-04
0.00	20.	20.	100,00	.95370-04

2.50 CAN BE USED AS STATISTICALLY SOUND CONSERVATIVE 95 PERCENT CONFIDENCE LIMITS SINCE THE ACTUAL CONFIDENCE LEVEL ASSOCIATED WITH THESE LIMITS IS 99.9999 PERCENT. AN A PROXIMATE LC50 FOR THIS DATA SET IS 1.413

WH N THERE ARE LESS THAN TWO CONCENTRATIONS AT WHICH THE PERCENT DEAD IS BETWEEN 0 AND 100, NEITHER THE M VING AVERAGE NOR THE PROBIT METHOD CAN GIVE ANY 8! ATISCALLY SOUND RESULTS.

DATE: 6/27/02 SAMPLE: Outfall 006 TEST NUMBER: RT-1 DURATION:

48 hour

SPECIES: C. variegatus

METHC ) CONFIDENCE LIMITS LC50 UPPER LOWER SPAN BINON 'AL 1.413 .000 2.500 2.500 ***** MAA **** ***** PROBI' ****** ****** ***** SPEAR FAN 1.467 *****

**** ' LIMIT DOES NOT EXIST

### Chesapeake Bay Water Quality Monitoring Data

#### Predischarge

#### After Discharge

9	Time of Sample	BOD (mg/L)	DO (mg/L)	AMM (mg/L)	Temp C	pH SU	Salinity ppt	Time of Sample	BOD (mg/L)	DO (mg/L)	AMM (mg/L)	Temp C	pH (8U)	Salinit ppt
1														
2														
3														
۱														
5														
6														
7														
8														
9														
10														
11														
12						Somethon								
13														
14					(*)									
15														
18														
17														
18														
19														
20											8		1	
21														
22														
23						į.								
24														
25											Construction (Construction)			
26		127												
27													in .	L
28							Ī							
29			1											
30		<2		0.259			18.7		3.1		0.392			18.9
31		1	1	V-A-V-D			1	1		j -	1		(A) (A) (A)	T

Name of Vessel Readville

Name of Sampler Tom Boyd

#### ZAPATA PROTEIN REEDVILLE, VIRGNIA DMR REPORTING

	LA	GOON 002		(	NTCH 008	
DATE	2A	TEMP C	FLOW	pH 22-	TEMP C	FLOW
	7.48	29	116,500 1	7.99	29	4,420,420
08/01/02	7.59	30	68,100 2	8.15	34	4,953,800 2
08/02/02	7.54	30	100,000 2	8.11	23	11,081,120
08/03/03	7.51	30	180,200 4			
08/04/02	7.64	26	62,900 \$1	=	**	8,920,560 4
08/05/02	7.20	30	59,400 c	7.88	38 32	11,841,1205
08/06/03	7.47	28	212,0007	7.65		2,486,900 4
09/07/02	6.78	28	143,500 ( )	7.8	33	1,673,520 7
08/08/02	7.22	26	203,700 4	7.84	32	11,041,1208
08/09/02 .1	7.12	26	109,400 (0)	7.60	39	1,973,520
09/10/02	1.12		1	7.18	32	1,0/3,027
08/11/02			i			a out odd
08/12/02	6.22	33	129,400 "	7.56	31	8,246,080 10
08/13/02	7.07	29	76,000	6.95	35	6,907,520 (
08/14/02	7.22	29	118,10013	7.49	33	7,894,080 12
08/16/02	7.29	29	131,300 14	7.52	32	7,664,08015
08/16/02	7.32	26	188,900 (1	7.01	33	9,887,800 14
08/17/02		28	158,000   4			
08/18/02	7.24	30	21,1007			
09/19/02	7.37	32	36,000 \8	7.83	37	7,400,700 15
03/30/05	7.72	30	116,700 14	7.28	34	8,387,480 14
08/21/02	7 47	28	144,500 2	7.67	28	1,978,520
08/22/02	7.54	28	68,300 2	7.77		8,388,015
08/25/02	7.83	28	138,900 27	8.11	25	7,400,700 10
08/24/02	7,44	27	109,500 27			
08/25/02	7 43	27	61,900 24	21		= = 2
08/28/02	7.47	173	7,900 2		33	4,452,777 2
08/27/02	7.32		115,100 2		32	7,400,700 2
08/28/02	7.54	L 200-50	181,100 2			8,427,180 2
08/29/02	7.47		43,600 2			
08/30/02	7.52		28,400 2			
08/31/02	7.61	23	<b>XD,400</b>		24	_ ,1/1 00
TOTAL	215.1	8 819	3.1528	3 168	7.57 71	- 50
AVG.		28.	2 -109	7.6		
MIN		8 23	.008	_	95 28	
MAL			.212	- 8·	15 38	11.84

BIOLOGICAL MONITOR 951 148	OS/US UZ JESO NO. OZO OTIVO
PIOCOSTONE HOUSE AND STREET THE PROPERTY CONTRACTOR	ing the sample. See reverse side for instructions.
To be completed by the party	5. Purchase order no
1. CHent name DMEGA ProteIN	5. Purenage Graet Ho-
2. Sampler's name J. C. Haell	6. Affiliation
2. Samplar's name	2 7. APPRE permit no./County Northumberland Co
3. Semple acurce Lagoon Discharge	B. Test period for which data is being submitted:
1 le Allace	17.23-00 Date: Received by: Authory ). Jing 17/29/10000;
8. Samplarelingulahettay:	/Dete:Received by:/Dete.
CARLOSO PRINTER REPORT OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE PROPERTY OF THE	7.9.5
Pencription of Sa	mpling Methods and Equipment Composite
	Composite type Controcks
10. Type of sample collected:	Collection period: from 7-22-02 (date)
Date collected	Collection period: from 7-22-02 (onte)
Time poliected	
7770	
. Valume	1
111 / **	14, No. of subsamples
17. Flow during sampling 41,600	15. Frequency
	16. Volume
13. Number of containers shipped	TO! YOUTH
(5) Italinat at any	
E 6	A M. Olivada
Condition of	Effluent at Time of Gollestian
17. pH 94 18. Chlorine	20. is the sample:
17. pH 7-71 18. CHOTH	Chlorinated
19. Temperature:	Dechlorinated
At collection point	C Unknown
In collection device (comp. sample must b	Dechlorination method
	Publiculariditietts magitus.
	hippins information
	24. T
21. Method of shipment UPS 22. T	hata shipped 7-73-02 23. Time Approx 21 pm
and the star semale protect with ice for shipme	nt? V65
25. Cubrody seal in place by Jan A. Ha	Date 7-23- OL Time (1:00 Am
28 Cuetody see at party #7	
	Instructions to Lab
	Instructions to Lab
as Time of testis) to be performed	Instructions to Lab
26. Type of test(s) to be performed 27. Should BMI dechloringte the sample (Yes or	Instructions to Lab
as Time of testis) to be performed	Instructions to Lab
26. Type of test(s) to be performed	No!28. Should ammonia be measured? (Yes or No)
26. Type of test(s) to be performed 27. Should BMI dechloringte the sample (Yes or	Not28. Should ammonia be measured? (Yes or No) lon is correct Amel
26. Type of test(s) to be performed	No!28. Should ammonia be measured? (Yes or No)
26. Type of test(s) to be performed 27. Should BMI dechloringte the sample (Yes or 23. Comments 30. I pertify that the above informations	No. 28. Should ammonia be measured? (Yes or No
26. Type of test(s) to be performed 27. Should BMI dechlorinate the sample (Yes or 29. Comments 30. I pertify that the above informations Alk 1/4	Not28. Should ammonia be measured? (Yes or No) lon is correct Amel
26. Type of test(s) to be performed 27. Should BMI dechlorinate the sample (Yes or 29. Comments 30. I pertify that the above informations of the sample (Yes or Alk I/A Hard Uk	No. 28. Should ammonia be measured? (Yes or No
26. Type of test(s) to be performed 27. Should BMI dechlorinate the sample (Yes or 29. Comments 30. I certify that the above information of the sample (Yes or Alk 1/4 Hard Uk. EMI Sample IDS ()MA-1729027 Received I	No. 28. Should ammonia be measured? (Yes or No
26. Type of test(s) to be performed 27. Should BMI dechlorinate the sample (Yes or 29. Comments 30. I certify that the above information of the sample (Yes or Alk 1/4 Hard Uk. EMI Sample IDS ()MA-1729027 Received I	No. 28. Should ammonia be measured? (Yes or No
26. Type of test(s) to be performed 27. Should BMI dechloringte the sample (Yes or 29. Comments 30. I certify that the above information of the sample (Yes or Alk I/A Hard Vis. EMI Sample ID# OMP. 1719027 Received II	No. 28. Should ammonia be measured? (Yes or No
26. Type of test(s) to be performed  27. Should BMI dechlorinate the sample (Yes or 29. Comments  30. I certify that the above information of the sample (Yes or 29. Comments)  Alk I/A  Hard Vis.  EMI Sample IDE OMA, 1719127 Received II Upon strivel at BMI: Custody seel	No. 28. Should ammonia be measured? (Yes or No

TRANSFORM: NO TRANSFORM

TITLE: OMP072402-2 FILE: omp072402

NUMBER OF GROUPS: 2

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1 1 1 2 2 2 2	0 0 0 0 100 100 100 100	1 2 3 4 1 2 3	1.0000 1.0000 1.0000 1.0000 0.8000 1.0000 1.0000	1.0000 1.0000 1.0000 1.0000 0.8000 1.0000 1.0000

OMP072402-2

File: omp072402 Transform: NO TRANSFORM

## SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

	IDEN! IL LOUI TON	N	MIN	MAX	MEAN	
1 2	0	4	1.000 0.800	1.000	1,000 0,950	

OMP072402~2

File: omp072402 Transform: NO TRANSFORM

## SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %	e: •
1 2	0° 100	0.000 0.010	0.000	0.000 0.050	0.00 10.53	

OMP072402-2

E # ____ #

File: omp072402

Transform: NO TRANSFORM

	STEEL'S MANY-ONE R	ANK TEST	- H	o:Courtof	Treatme	nt	
GROUP	1 DENTIFICATION	TRANSFORMED MEAN	RANK SUM	CRIT. VALUE	df	SIG	-
	******		~~~~~			200	
1 2	0 100	1.000 0.950	16.00	11.00	4.00		10 92

# ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY BMP Compliance Report

Facility Name: Omega Protein Address: Reedville, Va. VPDES Permit No.: VA0003867 Report Period: From 711102 To 716102 COMPLIANCE / NONCOMPLIANCE * Paint Area (check as appropriate) *Comments on Noncompliance Name of Principal Exec. Offices or Authorized Agent / I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum

imprisonment of between 6 months and 5 years).

Signature of Principal Officer or Authorized Agent /

# ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY BMP Compliance Report

Facility Name: Omega Protein Address: Reedville, Va.

VPDES Permit No.: VA0003867

Report Period: From 7/7/02 To 7/13/02

Paint Area			COMPLIANCE / NONCOMPLIANCE (check as appropriate)
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# ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY BMF Compliance Report

VPDES Permit No.: VA0003867	72 E
Report Period: From 7/14/02 To 7/120	102
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Name of Principal Exec. Officer or Authorize	d Agent / Title
in accordance with a system designed to information submitted. Based on my inquiry directly responsible for gathering the informative, accurate and complete. I am aware	nt and all attachments were prepared under my direction or supervision assure that qualified personnel properly gather and evaluate the of the person or persons who manage the system or those persons ion, the information submitted is to the best of my knowledge and belief that there are significant penalties for submitting false information, ment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 these statutes may include fines up to \$10,000 and or maximum ears).

Facility Name: Omega Protein Address: Reedville, Va.

# ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY BMP Compliance Report

Facility Name: Omega Protein Address: Reedville, Va.

VPDES Permit	No.: VA0003867		
Report Period:	From 7 /21 /02 To	7/21/02	P
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including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum

imprisonment of between 6 months and 5 years).

Signature of Principal Officer or Authorized Agent /

# ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY BMP Compliance Report

Report Period:	From 7 /28/02 To 7 /3	102
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information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum

imprisonment of between 6 months and 5 years).

Facility Name: Omega Protein Address: Reedville, Va.

VPDES Permit No.: VA0003867



Graham Lyell Jett General Manager

**AUGUST 8, 2002** 

MS. DENISE MOSCA
DEPARTMENT OF ENVIRONMENTAL QUALITY
P.O.BOX 669
429 EAST CHURCH STREET
KILMARNOCK, VA. 22482

DMR EXCURSIONS JULY REPORT

#### **DEAR DENISE:**

DURING THE MONTH OF JULY WE EXPERIENCED FOUR EXCURSIONS THROUGH OUR OO6 OUTFALL. AS WE HAD STATED IN OUR LAST DMR REPORT WE WERE EXPECTING TO BE DISCHARGING THROUGH A DIFFUSER ON OUR "001" DISCHARGE AND FEEL THAT THESE OCCURANCES WOULD NOT HAVE HAPPENED UNDER THE CONDITIONS OF THE EXPECTED NEW PERMIT.

THE EXCURSION THROUGH THE 002 OUTFALL FOR AMMONIA WAS DUE TO THE SURGE TANK NOT BEING READY UPON START-UP OF OUR DISCHARGE. THIS CAUSED A HIGH DOSAGE OF ACIDIC CONDENSATE WATER TO BE DISCHARGED TO THE POND DURING CLEANING OPERATIONS OF OUR EVAPORATOR PLANT. DURING THESE ACIDIC TIMES THE DO IS AFFECTED AND THEREFOR THE BACTERIA AND AMMONIA IS AFFECTED. THIS TANK IS NOW COMPLETED AND NOW IN OPERATION.

SINCERELY,

LYELL JETT

CC. Bishop



Graham Lyell Jett General Manager

**AUGUST 8, 2002** 

MS. DENISE MOSCA
DEPARTMENT OF ENVIRONMENTAL QUALITY
P.O.BOX 669
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SINCERELY.

LYELL JETT

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#### DEPARTMENT OF EN CONMENTAL CHAITY

## NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM INPOES!

DISCHARGE MONITORING REPORT (DMR)

PERMITTEE NA MADDRESS (INCLUDE

ADDRESS P. O. Box 175

FACILITY Omega Protein

:AME

FACILITY NAME/LOCATION IF DIFFERENT

Omega Protein, Inc.

Reedville VA 22539

VA0003867

PERMIT NUMBER

DISCHARGE NUMBER

MONITORING PERIOD YEAR! MO DAY YEAR MO DAY FROM 02 7 1 TO 02 7

Industrial Nator

1999

DEPT, OF ENVIRONMENTAL BUALITY (REGIONAL OFFICE)

Milmarnock Regional Offic P.O Box 569 425 East Church Street Kilmarmock VA 22482

(#04) 435-3141

NOTE: READ PERSON AND DESIGNAL BUSTRUCTIONS

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PAGE

PERMITTEE MANE/ADDRESS/INCLUDE FACILITY NAME/LOCATION IF DIFFERENCY

NAME Omoga Protein Reviville

ADDRESS PO Box 175

Reedville

VA 22539

LOCATION 618 Menhaden Rd

# COMMONWEALTH OF VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

NATIONAL POLLUTANT DISCHARGE ELIMBATION SYSTEM(NPRES)
DISCHARGE MONITORING REPORTIONIC)

V8000386? OUG
PERMIT NUMBER DISCHARGE NUMBER
MONITORING PERSON
YEAR NO DAY YEAR NO DAY

Industrial Major

06/19/2002

#### DEPT. OF ENVIRONMENTAL QUALITY (REGIONAL OFFICE)

Kilmannock Satellite Office P.O Box 169

Church Street

Kilmannock

VA 2218

NOTE: READ PERMIT AND GENERAL INSURACTIONS BEFORE DOMPLETING THE PURIL

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				TYPED OR PRINTED MAINE	SIGNATURE		YEAR	MICA	DAY

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FACILITY NEWASTOCATION IF DIFFERENTS PERMITTEE NAME/ADDRESS(INCLIAN:

Omega Protein Reedville S HAME

AUDINERS TO Box 175 Seedwille.

VA 22539

FACILRY 610 menhaden Rd LOCATION

NATIONAL POLLUTANT DISCHARGE ELINIMATION SYSTEMIAPDES) COMMONWEALTH OF VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY DISCHURGE MONTTONING REPORTHINARY

NO DAY VEAR NO DAY DISCHARGEMANDER 900 PERMITNIMBER VACCEDAGE S E

CAST159/2002 Industrial Major

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DEPT. OF ENVIRONMENTAL QUALITY (PECKONNE OFFICE)

filearmock Satellite Office Church Street P.O Row 669

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DATE

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# COMMONWEALTH of VIRGINIA

### DEPARTMENT OF ENVIRONMENTAL QUALITY

W. Tayloe Murphy, Jr. Secretary of Natural Resources

#### PIEDMONT REGIONAL OFFICE

4949-A Cox Road Glen Allen, Virginia 23060 (804) 527-5020 Fax (804) 527-5106 www.deq.state.va.us August 13, 2002 Robert G. Burnley Director

Gerard Seeley, Jr. Piedmont Regional Director

Mr. Lyell Jett General Manager Omega Protein P.O. Box 175 Reedville, VA 22539 CERTIFIED MAIL
RETURN RECEIPT REQUESTED

RE:

VPDES Permit No. VA0003867 Omega Protein

Dear Mr. Jett:

Enclosed please find a new DMR form for outfalls 002, 003 and 006 showing the ammonia and cyanide limits that came effective upon the completion of the schedule of compliance in your VPDES permit. Please discard the DMR previously sent to you and insert this updated page in your permit.

In accordance with the permit, you are required to the behind monitoring reports to the Kilmarnock Office. The reporting form which is enclosed supersedes any that you have received from this office and should be used from now on. You will be responsible for obtaining copies of the reporting form.

If you have any additional questions, please do not hesitate to contact us.

Sincerely,

Curtis J. Linderman, P.E. Water Permits Manager

cc: DEQ-OWRM EPA-Region III (3PW12)

VDH-RRO (2 copies)

Enclosures: DMR - Permit No. VA0003867

#### 'ERMITTEE NAME/ADDRESS(INCLUDE 'ACILITY NAME/LOCATION IF DIFFERENT)

Omega Protein Reedville

VA 22539

IAME

**OCATION** 

DDRESS PO Box 175

Reedville

ACILITY 610 Menhaden Rd

### **COMMONWEALTH OF VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY**

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES) DISCHARGE MONITORING REPORT(DMR)

> VA0003867 002 PERMIT NUMBER DISCHARGE NUMBER MONITORING PERIOD

YEAR YEAR MO DAY MO DAY **FROM** 

Industrial Major

06/26/2002

# DEPT. OF ENVIRONMENTAL QUALITY (REGIONAL OFFICE)

Kilmarnock Satellite Office P.O Box 669 Church Street

Kilmarnock

- VA 22482

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

PARAMETER		QUANTI	ITY OR LOADING	·		QUALITY OR CO	NCENTRATION		NO.	FREQUENCY OF	SAMPLE
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35 APPIONIA, AS N	REQRMN1	******	*****		******	38.0	45.3	MG/L		2/M	24HC
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379 TOXICITY, FINAL,	REPORTD	*****	******			*******	******				
ACUTE	REQRMN	******	******		100	******	*******	NOAEC		1/3M	24HC
50. JIL & GREASE	REPORTD				******	******	******				
	REQRMN1	27.6	50.9	KG/D	*******	******	*******	MG/L		2/M	GRAB

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)	OPERATOR IN F	RESPONSIBLE CHARGE		DAT	E	
OVERFLOWS						1		1	
REPARED UNDER I	MY DIRECTION OR SUPE URE THAT QUALIFIED P	THIS DOCUMENT AND ALL RVISION IN ACCORDANCE ERSONNEL PROPERLY GATH INQUIRY OF THE PERSON	WITH A SYSTEM ER AND EVALUATE THE	TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
HE SYSTEM OR TO NEORMATION, THE	HOSE PERSONS DIRECTL E INFORMATION SUBMIT	Y RESPONSIBLE FOR GATH TED IS TO THE BEST OF	ERING THE MY KNOWLEDGE AND	PRINCIPAL EXECUTIVE OFFIC	TELEPHONE				
ENALTIES FOR SUND IMPRISONMENT	UBMITTING FALSE INFO T FOR KNOWING VIOLAT	I AM AWARE THAT THERE RMATION, INCLUDING THE TIONS. SEE 18 U.S.C. &	POSSIBILITY OF FINE 1001 AND 33 U.S.C. &						
aximum impriso	nment of between 6 m	es may include fines unonths and 5 years.)	p to \$10,000 and/or	TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

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# ERMITTEE NAME/ADDRESS(INCLUDE ACILITY NAME/LOCATION IF DIFFERENT)

610 Menhaden Rd

AME

**4CILITY** 

**DCATION** 

DDRESS PO Box 175

Reedville

Omega Protein Reedville

VA 22539

COMMONWEALTH OF VIRGINIA
DEPARTMENT OF ENVIRONMENTAL QUALITY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

VAO	00386	7	П	003		
PERM	MUM TI	BER	] [	ISCHAR	GE NU	MBER
		MONI	TORII	NG PERIO	OD	
YEAR	МО	DAY		YEAR	МО	DAY
			ТО			

Industrial Major

06/26/2002

DEPT. OF ENVIRONMENTAL QUALITY (REGIONAL OFFICE)

Kilmarnock Satellite Office

P.O Box 669 Church Street

Kilmarnock VA 22482

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

PARAMETER	1 1	QUANT	TY OR LOADING			QUALITY OR CO	NCENTRATION		NO.	FREQUENCY OF	SAMPLE TYPE
PARAMETER		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS	EX.	ANALYSIS	TIFE
001 FLOW	REPORTD				******	******	******				
	REQRMNT	NL	NL	MGD	*****	******	******			CONT	EST
OC :	REPORTD	*****	******			*****					
	REQRMN1	****	******		6.0	******	9.0	su		2/M	GRAB
003 BOD5	REPORTD				*****	*****	******				
	REQRMN	4296	7710	KG/D	*****	*****	*****			2/M	24HC
004 TSS	REPORTD	112.00			******	*****	*******				
104 135	REQRMNI	114	282	KG/D	******	*****	*******			2/M	24HC
007 DO	REPORTD	******	******				*****				
	REQRMN	******	******		NL	NL	*****	MG/L		1/DAY	GRAB
039 AMMONIA, AS N	REPORTD	******	******		******						
	REQRMN	*****	******		******	39.6	49.0	MG/L		2/M	24HC
080 TEMPERATURE, WATER	REPORTD	******	******		******						
080 TEMPERATURE, WATER (DEG. C)	REQRMN	*****	******		******	NL	NL	С		1/DAY	IS
	REPORTD				*******	******	******				
	REQRMN	426	784	KG/D	*****	*****	******			2/M	GRAB

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)	OPERATOR IN RE	SPONSIBLE CHARGE		DAT	E	
AND OVERFLOWS	OCCORNENCES					2			
PREPARED UNDER I	MY DIRECTION OR SUP	T THIS DOCUMENT AND ALL ERVISION IN ACCORDANCE PERSONNEL PROPERLY GATH	WITH A SYSTEM	TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
THE SYSTEM OR THE INFORMATION. THE	ESIGNED TO ASSURE THAT QUALIFIED PERSONNEL PROPERLY GATHER AND EVALUATE THE NEORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OF PERSONS HID MANAGE HE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE HEORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND			PRINCIPAL EXECUTIVE OFFICE	TELEPHONE				
BELIEF TRUE, ACT	CURATE AND COMPLETE UBMITTING FALSE INFO T FOR KNOWING VIOLA	. I AM AWARE THAT THERE ORMATION, INCLUDING THE TIONS. SEE 18 U.S.C. 4	ARE SIGNIFICANT POSSIBILITY OF FINE 1001 AND 33 U.S.C.						
1319. (Penaltic	s under these statu	tes may include fines u months and 5 years.)	p to \$10,000 and/or	TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

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610 Menhaden Rd

AME

**ACILITY** 

**CATION** 

DDRESS PO Box 175

Reedville

Omega Protein Reedville

VA 22539

DEPARTMENT OF ENVIRONMENTAL QUALITY NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES) DISCHARGE MONITORING REPORT(DMR)

**COMMONWEALTH OF VIRGINIA** 

	VAO				006		
	PERM	IT NUM	BER		ISCHAR	SE NU	MBER
			MONI	TORI	NG PERIO	OD	
	YEAR	МО	DAY		YEAR	МО	DAY
FROM				то			

Industrial Major

06/27/2002

#### **DEPT. OF ENVIRONMENTAL QUALITY** (REGIONAL OFFICE)

Kilmarnock Satellite Office

P.O Box 669 Church Street Kilmarnock

VA 22482

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

DADANETED		QUANTI	TY OR LOADING		QUALITY OR CONCENTRATION				NO.	FREQUENCY OF	SAMPLE TYPE
001 FLOW		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS	EX.	ANALYSIS	TIPE
OD1 FLOW	REPORTD				******	*******	******				
DOG DOG BOD5 DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG TSS DOG T	REQRMN1	NL	NL	MGD	******	*****	******			CONT	EST
00	REPORTD	******	******			******					
	REQRMN1	*****	******		6.0	******	9.0	SU		3D/W	GRAB
003 BOD5	REPORTD				*******	******	*****	1			
	REQRMNT	1755	3142	KG/D	*****	*******	******			3D/W	24HC
004 TSS	REPORTD				*****	*****	******				
	REQRMNT	655	1609	KG/D	******	******	*****			3D/W	24HC
012 PHOSPHORUS, TOTAL	REPORTD				******				FE		
(AS P)	REQRMN1	178.4	NL	KG/D	******	2.0	NL	MG/L		2/M	24HC
013 NITROGEN, TOTAL AS N	REPORTD				****						
	REQRMNI	NL	NL	KG/D	*****	NL	NL	MG/L		2/M	24HC
018 CYANIDE, TOTAL (AS	REPORTD				******						-
	REQRMN	******	*****		******	1.54	2.00	UG/L		2/M	GRAB
039 AMMONIA, AS N	REPORTD				******			2 (2)			
	REQRMN	******	*****		******	1.68	2.1	MG/L		2/M	24HC

ADDITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES TOTAL TOTAL FLOW(M.G.) TOTAL BOD5(K.G.)  AND OCCURRENCES			OPERATOR IN RI	DAT	т				
OVERFLOWS									
REPARED UNDER I	AY DIRECTION OR SUPE	THIS DOCUMENT AND ALL RVISION IN ACCORDANCE ERSONNEL PROPERLY GATH	WITH A SYSTEM ER AND EVALUATE THE	TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
INFORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE HE SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE INFORMATION. THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND			OR PERSONS WHO MANAGE ERING THE MY KNOWLEDGE AND	PRINCIPAL EXECUTIVE OFFICE	TELEPHONE			_	
PENALTIES FOR S	JEMITTING FALSE INFO	I AM AWARE THAT THERE PRMATION, INCLUDING THE PIONS. SEE 18 U.S.C. &	POSSIBILITY OF FINE						
.319. (Penaltie	g under these statut	es may include fines unonths and 5 years.)	p to \$10,000 and/or	TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

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# :RMITTEE NAME/ADDRESS(INCLUDE .CILITY NAME/LOCATION IF DIFFERENT)

Omega Protein Reedville

DRESS PO Box 175

**ME** 

Reedville

VA 22539

CILITY 610 Menhaden Rd

# COMMONWEALTH OF VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM(NPDES)
DISCHARGE MONITORING REPORT(DMR)

	VAC	00386	57	006						
	PERM	IT NUM	BER	DISCHARGE NUMBER						
å			MONI	TORIN	NG PERIO	DD				
	YEAR	МО	DAY		YEAR	МО	DAY			
				ᅡᄉ						

Industrial Major

06/27/2002

# DEPT. OF ENVIRONMENTAL QUALITY (REGIONAL OFFICE)

Kilmarnock Satellite Office

P.O Box 669 Church Street

Kilmarnock

VA 22482

NOTE: READ PERMIT AND GENERAL INSTRUCTIONS BEFORE COMPLETING THIS FORM.

'ARAMETER		QUANT	ITY OR LOADING		QUALITY OR CONCENTRATION				NO.	FREQUENCY OF	SAMPLE TYPE
. , , ,		AVERAGE	MAXIMUM	UNITS	MINIMUM	AVERAGE	MAXIMUM	UNITS	EX.	ANALYSIS	11112
80 TEMPERATURE, WATER	REPORTD	******	******		******	*****					
DEG. C)	REQRMN	******	******		*****	******	45.0	С		1/DAY	IS
Ou i & GREASE	REPORTD				******	******	******				
	REQRMN1	372	685	KG/D	******	******	******			3D/W	GRAB
	REPORTD		30				7/				
	REQRMN1									*****	
***************************************	REPORTD										
	REQRMN1									******	-
	REPORTD										<u> </u>
	REQRMNT									*****	
	REPORTD										
	REQRMNT									*****	
	REPORTD					, and a second					
	REQRMN									*****	
=	REPORTD										
	REQRMN									*****	

DITIONAL PERMIT REQUIREMENTS OR COMMENTS

BYPASSES AND	TOTAL OCCURRENCES	TOTAL FLOW(M.G.)	TOTAL BOD5(K.G.)	OPERATOR IN RESPONSIBLE CHARGE				E	
WERFLOWS							54		
EPARED UNDER I	MY DIRECTION OR SUPE URE THAT QUALIFIED F	THIS DOCUMENT AND ALL RVISION IN ACCORDANCE PERSONNEL PROPERLY GATH	WITH A SYSTEM IER AND EVALUATE THE	TYPED OR PRINTED NAME	SIGNATURE	CERTIFICATE NO.	YEAR	MO.	DAY
FORMATION SUBMITTED. BASED ON MY INQUIRY OF THE PERSON OR PERSONS WHO MANAGE E SYSTEM OR THOSE PERSONS DIRECTLY RESPONSIBLE FOR GATHERING THE FORMATION, THE INFORMATION SUBMITTED IS TO THE BEST OF MY KNOWLEDGE AND LIEP TRUE, ACCURATE AND COMPLETE. I AM AWARE THAT THERE ARE SIGNIFICANT			ERING THE MY KNOWLEDGE AND	PRINCIPAL EXECUTIVE OFFICE	TELEPHONE				
NALTIES FOR S	UBMITTING FALSE INFO T FOR KNOWING VIOLAT	RMATION, INCLUDING THE PIONS. SEE 18 U.S.C. 4	POSSIBILITY OF FINE 1001 AND 33 U.S.C. &	•					
19. (Penaltic	g under these statut	es may include fines unonths and 5 years.)	p to \$10,000 and/or	TYPED OR PRINTED NAME	SIGNATURE		YEAR	MO.	DAY

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### TOXICITY TESTS FOR OMEGA PROTEIN

#### Submitted to:

Mr. Lyell Jett Omega Protein P.O. Box 175 Reedville, VA 22539

Prepared by:

Biological Monitoring, Inc. 1800 Kraft Drive, Suite 101 Blacksburg, VA 24060

Phone: 540-953-2821 Fax: 540-951-1481 www.biomon.com

October 1, 2002

The following data have been internally reviewed and the personnel meticulously followed the methods. The procedures are deemed to be compliant with the methods and acceptable for reporting

diliony Smith (Laboratory Manager)

### BIOLOGICAL MONITORING, INC. Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Anthony Smith

No. of Organisms per Replicate: 5

Feeding Regime: 2x daily

Test Volume: 350 mL

Test Duration: 48 h

Time: 1627

Time: 1545

NPDES Permit #: VA0003867

Experiment ID#: OMP092502-2

Test Organism: Mysidopsis bahia

Test Type: Static Acute

Organism Age at Start of Test: 1 d

Sample Tested: Outfall 002

Sample Type: Composite

Sample Collection Frequency and Dates and Times: From 09/23/02 @ 0700 to 09/24/02 @ 0700

Sample Collector: Andy Hall Delivered by: UPS

Test Solution Renewal Frequency: N/A

Dilution Water Used: SS092402

Test Temperature:  $25 \pm 1$  °C

No. of Replicates per conc.: 4

Feeding prior to test: Normal

Chamber Size: 800 mL PP

Photo Period: 16h light/8h dark

Start of Test: Date: 09/25/02

End of Test: Date: 09/27/02

Equipment:

pH Meter: SA 720 (A) DO Meter: YSI 58 (b) SCT Meter: YSI 33 (A)

°C Measurement: Calibrated Thermometer

Salinity: SCT Meter

Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

# ACUTE TEST DATA REVIEW CHECKLIST

ermit l	Number VA 000 3867 Outfall 002 Permittee Omega		
Test Da	te <u>9/25-27/02</u> Period Reviewed: QT _ SA _ AN _ 1st _ 2nd _ 3rd _ 4t	Other h	
Testing	Laboratory		
#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
1	Was the test performed as per schedule?		
2.	Was the correct test performed?		
3.	Was the correct type of sample used?		
4.	Were pH, Jemp, Cl of sample checked at sample site (or within 15 minutes of sample retrieval)?	7	Big 216 (u
5.	Was the sample packed in ice and chilled to ≤4° C for transport? NOTE: Frozen samples are not valid!		34.67 -
6.	Were pH, DO, Cl, temperature and sample description recorded upon receipt?	V	
7.	Does description (visual, scent) of sample (when received at lab) seem typical for this type of facility?	/	
8.	Was the test initiated within 36 hours of sample retrieval from sampler?	and Som .	indle Mil
9.	a. Was the sample $DO \ge 4.0 \text{ mg/l}$ and $\le$ saturation at 25° C prior to test initiation? (applies to D. ulex, C. dubia, M. bahia, P. promelas, C. variegatus) b. Was the sample $DO \ge 6.0 \text{ mg/l}$ and $\le$ saturation at 12° C prior to test initiation? (applies to O. vkiss)	* 9;	regadis)
10.	If 9 is "NO", was the DO adjusted to the acceptable range (see a. and b. above) prior to test initiation?	1	
11.	If the sample had a chlorine residual, was it dechlorinated?	NA	
12.	Did the permit allow for dechlorination of the sample? (Only if it contains a compliance schedule for CI limit or for dechlorination)	NA	
13.	If the sample was dechlorinated, were controls treated with the same amount of dechlorination agent and run with untreated controls? (determines adverse effect of agent)	NA	
14.	Was the sample pH within the 6.0 - 9.0 range?		
15.	Was the age of the organisms in the correct range at test initiation?  a. P. promelas and C. variegatus - 1-14 days old, within 24 hours of age of each other  b. O. mykiss - 15-30 days old  c. D. pulex and C. dubia - <24 hours old  d. M. bahia 1-5 days old, within 24 hours of age of each other		
16.	Were 5 geometric test concentrations (preferably 0.5 series) and 1 control set up?	+ contu	f -
17.	Was the test chamber size acceptable?  a. P. promelas, C. variegatus, M. bahia = 250 ml minimum  b. O. mykiss = 5000 ml minimum  c. D. pulex and C. dubia = 30 ml minimum  SN WM		
18.	Was the sample volume acceptable?  a. P. promelas, C. variegatus, M. bahia - 200 ml minimum  b. O. mykiss - 4000 ml minimum  c. D. pulex - 25 ml minimum		

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	d. C. dubia - 15 ml minimum		
19.	Was the minimum number of replicates per concentration represented?  a. 2 replicates - P. promelas, O. mykiss  C. variegatus, M. bahia  b. 4 replicates - D. pulex, C. dubia	4-04	
20.	Was the minimum number of organisms in each replicate?  a. 10 organisms - P. promelas, O. mykiss  C. variegatus, M. bahia  b. 5 organisms - D. pulex, C. dubia	л 2e -	OK
21.	a. Was the dilution water synthetic moderately hard water or 20% DMW? (applies to freshwater pecies P. promelas, Q. mykiss, D. pulex, C. dubia)  Was the dilution water synthetic moderately hard water or 20% DMW that had been adjusted to 20 was the dilution water synthetic moderately hard water or 20% DMW that had been adjusted to 20 ppt, or the same salinity as the receiving water? (applies to salt water species, C. variegatus, M. bahia).		3.
22.	Was the dilution water hardness within the 80-100 mg CaCO/L?		3
23.	Was the dilution water hardness within the 60-70 mg CaCO ₃ /L?	-	5
24.	Was the dilution water pH within the range of 7.4 – 7.8 (7.9 – 8.3 for mineral water)?		-
25.	a. Was the test temperature 25±1° C upon initiation, and throughout the test? (applies to P. romelas, D. pulex, C. dubia C. variegatus, M. bahia) b. Was the test temperature 12±1° C upon initiation, and throughout the test? (applies to O. sykiss)	V	20
26.	Was the temperature measured daily in one replicate of each concentration?	1	<u> </u>
27.	Was the DO measured daily in one replicate of each concentration? (Exceptions to this requirement are for tests using D. pulex or C. dubia, where the 24-hr DO reading can be omitted to prevent organism stress.)	V	
28.	If the DO dropped to <4.0 mg/l, was aeration initiated? (Exceptions to this requirement are for tests using D. pulex or C. dubia, where aeration is impractical.)	N4	
29.	If aeration was necessary (and acceptable), were all test chambers aerated for the duration of the test, and the time at which aeration was initiated recorded?	NA	-
30.	If aeration was necessary (and acceptable), was it applied at a maximum rate of 100 bubbles/minute so as not to cause injury to the organisms?	NA	
31.	Was pH measured at the beginning and end of the test (daily)s optimal) for a 48-hour test, or at 0, 48 hours, after renewal, and at 96 hours for a 96-hour test in one replicate of each sample concentration?		-
32.	a. For a freshwater test, was conductivity measured at the beginning and end (also at renewal for 96-our tests) of the test in one replicate of each concentration? (applies to freshwater species P. promelas, O. ykiss, D. pulex, C. dubia)  b. For a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour ests) of the test in one replicate of each concentration? (applies to salt water species, C. variegatus, M. ahia)		
33.	For freshwater tests, was the alkalinity measured in 100% effluent and the control at the beginning of the test?	NA	
34.	For freshwater tests, was the hardness measured in 100% effluent and the control at the beginning of the test?	NA	-
35.	a. For a test using Mysidopsis bahia, were the mysids fed Artemia nauplii daily? It daily b. For a 96-hour test using either Pimephales promelus or Cyprinodon variegatus, were the larvaded prior to sample renewal at 48 hours?	0	
36.	For a 96-hour test using either Pimephales promelas or Cyprinodon variegatus, was the sample used for	1 NA	<i>F</i>

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	renewal the original sample?		
37.	Was the daily photoperiod 16 hours light/8 hours dark?		
38.	Were the surviving organisms counted daily in all test chambers?	/	
39.	Was the test terminated at 48±1 hours (less than 47 hours invalidates the test) or 96±1 hours (less than 95 hours invalidates the test)?	/	
40.	Was the percent survival in each concentration recorded at the end of the test?		
41.	Was the percent survival in the controls ≥90%?	V	
42.	Was the LC ₅₀ correctly determined?	V	
43.	If the acute test was run in conjunction with a chronic test using the same species, was the acute test initiated with the second or third sample pulled for the chronic test? (Any sample other than the same sample used to initiate the chronic test is acceptable.)	NA	

Items in bold type (and shaded) are significant in that if they are answered "NO", the test is automatically deemed "not acceptable" and must be repeated to fulfill permit TMP requirements. Bold type items are numbers 3, 5, 8, 12, 15, 25, 26, and 41.

### RESPONSE GUIDE

1 8.	Response should be "YES" or note the problem in the review
9 10.	If 9. is "NO", then 10. must be "YES" or the test is not acceptable then 19
11 13.	If 11. is "YES", then 12. and 13. must be "YES" or the test is not acceptable
14 17.	If 14. is "NO", then 15., 16. and 17 must be "YES" or the test is not acceptable
18 43.	Response should be "YES" or note the problem in the review

### **RATING**

ACCEPTABLE	NOT ACCEPTABLE
1100211122	110111001111001

#### Comments

# BIOLOGICAL MONITORING, INC. Acute Toxicity Test Data Summary

Client	Omega Protein	NPDES PERMIT #: VA0003867						
Test Organism	Mysidopsis bahia□		Date	Time				
Experiment ID	OMP092502-2	Start Test	09/25/02	1627				
Sample Tested	Outfall 002	End Test	09/27/02	1545				

## RESULTS

		~	istry Analyses nge)		
Conc.	Temp. (°C)	D.O. (mg/L)	рН	Salinity (ppt)	Survival (%) 48 h
0 100	25 25	5.6-6.3 5.6-6.4	7.8-7.9 8.0-8.1	25 25	100 100

# STATISTICAL ANALYSES

Test Method	NOAEC
Steel's Many One Rank Sum	100%
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# BIOLOGICAL MONITORING, INC.

Experiment I.D. #: OMP 092502-7 NPDES Sample: OMP 092503-1	S#: VA 000 3867 Client: Container: PE Projec	A	Il/Station No. 602
Sample Type: Grab: Collection Date: Composite: Collected From: Date: 092402 Time: 0700 Collected To: Date: 092402 Time: 0700	Test Organism: Species: Mysidopsis bahia Source: ABS Batch#: ABS 608401 Age: 1 Dae No. of organisms con. Z.0		Ouration: 484 Time: 1627 Time: 1545 Waterbath/Shelf#: 4 4 2

Con. © Or mg/L	Test Cont. #	N	umber o	of Live	Organis	sms	D	issolve	ed Oxyg	en (mg/	/L)	pН						Sa	alinity 0	/00		Temperature (°C)				
	_	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	_	T'.	Ι				T	Γ'	T -	1
0	A	5	5	5		1	C.3	5.6			-	7 7	70	7.9	12	90	0	24	48	72	96	0	24	48	72	96
	B	5	5	5							1	0	10-1	1.9	<del>                                     </del>	-	25	25	25			25	25	25		
	C.	5.	5	5														-	-	<u> </u>		-				_
	D	5	3	3						8				-						-	-	-	-	-		_
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1	B	5	5	3			0.4	5.6	5.7			80	8.1	80			25	25	25			25	25	25		
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# BIOLOGICAL MONITORING, INC. Toxicity Test Procedure Check Sheet

	sed: P.P.	Specify below	v no. milliliters (mLs	) of diluent and
No. of replicates per concentration:	епи	uent measured out per conc	entration in this test:	
Are all test chambers properly labeled?	Concentration mg/L Other	Diluent	Effluent	Total
Specify vessel type and volume used to measure and deliver effluent	0	1500	0	1500
and differ to test chambers:	100	0	1500	1500
graduated cylinder (s): pipet (s):				
volumetric flask (s):other				
Specify material (s) used to place test organisms into test chambers:	ide har acal			<u> </u>
Total Chlorine of sample upon arrival (mg/L): <0.07	for none pipet			*
Total Chlorine of sample after dechlorination (mg/L):				
Pretest treatment for organisms: Normal				
Exposure Chamber Total vessel capacity: \$\mathcal{G}^{\text{out}} \subseteq \text{ \text{Feeding schedule}} \\ Test solution volume: \$\frac{360}{m} \text{L}\$ Not fed:  Water Depth Constant: \$\subseteq \text{ Fed daily: }\subseteq \text{Z}_\times \\ Cyclic: \text{Fed irregularly (describe)}	None:Slow:	~	Screened Animal Not used: Used: Photoperiod: 8h/16h:	
Type of food: live time	Vigorous:		8h/16h: Other:	
Conditions of surviving organisms at end of test:	Degining:	(hour)		
Torred 14	.7:			
Methods of randomization employed: Kandowa #				
vacation of randomization employed:				
Methods of randomization employed: Kardom #  Comments:		8.1		

## SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name OMEGA Protein 5. Purchase of	rder no
2. Sampler's name ANDY HALL 6. Affiliation	Prod. MANAGER
0 1 0 11	mit no./County_ <i>1/A010386</i> 7
	for which data is being submitted:
9. Sample relinquished by: Aug HALL / 92402 Pate: Rec	eived by: Ben A Moching 19/18/00 Date;
Sample relinquished by:/	ceived by:
Description of Sampling Methods	and Equipment
10. Type of sample collected:	Composite V
Grab	Composite type
Date collected	Collection period: from 9-23-02(date)
Time collected	7:00 Am (time)
Volume	to 9-24-0' (date)
Nation Modern Co.	7:00 Ar-(time)
11. Flow during sampling 145, 400	14. No. of subsamples
12. Type of container   GAL. PLASTIC	15. Frequency
13. Number of containers shipped	16. Volume
17. pH 7.44 18. Chlorine  19. Temperature:  At collection point In collection device (comp. sample must be @ or below 4°C)	20. Is the sample:  Chlorinated  Dechlorinated  Unknown  Dechlorination method
Shipping Information	
21. Method of shipment HPS 22. Date shipped 9/22 24. Was the sample packed with ice for shipment? 125. Custody seal in place by J. R. HALL	1/02 23. Time Approx 2:30 P.M. Date 9/24/02 Time 1:00 PM
Instructions to Lab	
26 Time of tootio) to be performed	ĝ.
26. Type of test(s) to be performed	d ammonia be measured? (Yes or No)
29. Comments	d animona be measured; (165 of No)
29. Comments	000 P 0000
30. I certify that the above information is correct	Signature 9/24/02
********************************	***********
Alk NA For BMI Use Only Hard NA	
HMI Sample II)# (2Mf agasa) - I neceived by Double H. Windle.	. Date 9 /25/03 Time 11:30
	Date 9 (25/03 Time 11:30 C pH V 3 Chlorine C 0.0 m/LDO 11.8
Upon arrival at BMI: Custody seal Temperature	c_ pH \ 7.3 Chlorine \ 0.61 \ / LDO 11.8
Upon arrival at BMI: Custody seal Temperature & Salinity 33	pH V.3 Chlorine Co.01 m/LDO 11.8
Upon arrival at BMI: Custody seal Temperature	c_ pH \ \ 3 Chlorine \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \

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OMP092502-2
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File: 09 Transform: ARC SINE(SQUARE ROOT(Y))

### Shapiro - Wilk's test for normality

D = 0.000

I = 0.000

Data FAIL normality test. Try another transformation.

Jarning - The F-test of homogeneity is sensitive to non-normal data and should not be performed.

'ITLE: OMP092502-2 rILE: 09

TRANSFORM: NO TRANSFORM

NUMBER OF GROUPS: 2

GRP	IDENTIFICATION	REP	VALUE	TRANS VALUE
1	0	1	1.0000	1.0000
1	0	2	1.0000	1.0000
. 1	0	3	1.0000	1.0000
1	0	• 4	1.0000	1.0000
2	100	1	1.0000	1.0000
2	100	2	1.0000	1.0000
2	100	3	1.0000	1.0000
2	100	4	1.0000	1.0000

OMP092502-2

File: 09 Transform: NO TRANSFORM

### SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 1 of 2

ЗP	IDENTIFICATION	N	MIN	MAX	MEAN
1	0	4	1.000	1.000	1.000
3	100	4	1.000	1.000	1.000

OMP092502-2

Γile: 09

Transform: NO TRANSFORM

#### SUMMARY STATISTICS ON TRANSFORMED DATA TABLE 2 of 2

G4D	IDENTIFICATION	VARIANCE	SD	SEM	C.V. %
	0	0.000	0.000	0.000	0.00
3	100	0.000	0.000	0.000	0.00

OMP092502-2

I le: 09 Transform: NO TRANSFORM

#### STEEL'S MANY-ONE RANK TEST Ho:Control<Treatment</li>

		TRANSFORMED	RANK	CRIT.		
GROUP	IDENTIFICATION	MEAN	SUM	VALUE	$\mathbf{df}$	SIG
1	0	1.000				
2	100	1.000	18.00	11.00	4.00	
		SAN SAN THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CONTRACT OF THE CO				

Critical values use k = 1, are 1 tailed, and alpha = 0.05

# BIOLOGICAL MONITORING, INC. LABORATORY WORK ORDER

Project Manager: /	Date: 9/25/02
Assigned to:	Test Start Date: 9/25/02
Client: Omige Protein	Client's P.O.#:
Test ID#: OMP092502-2	BMI Project #: 3291
Test Description: SAMb	Test Prefix: OMP
Test Conditions (Circle Appropriate Choice)	
Acute/Chronic	
Organism: P.p., D.p., D.m., C.d., Db., C.v., H.a., Ct	Toxicant: 002 Permit No.#: VA 00 386.7
Duration: 24h, 48b, 96h, 7d, 3 brood Renew at: 24h, 48h, 96h, daily, none	Test Vol: 350 M Chamber: 800M
Concentrations: [0, 6.25, 12.5, 25, 50, 100%] Other: (0, 6.25, 12.5, 25, 50, 100%)	IWC:
Replicates: 1, 2, 3, <b>4</b> , 8, 10 Diluent: MHRW, Surface, Synthetic Seawater	Other:
Temperature: $12 \pm 1^{\circ}\text{C}$ , $20 \pm 1^{\circ}\text{C}$ , $23 \pm 1^{\circ}\text{C}$ , $28 \pm 1^{\circ}\text{C}$ Test Salinity: Freshwater, 13 ppt, 20 ppt	
Feeding: 1 x daily, (x daily, 3 x daily, none, as specified	
Dechlorination Sample: Yes No (Circle One) pH Adjustment to be done: Yes No /IF necessary	
Extra Controls:	
Special Conditions: 5 ag. Jag	
Comments:	

### BIOLOGICAL MONITORING, INC. Toxicity Test Condition Summary

Client: Omega Protein

Prepared by: Anthony Smith

NPDES Permit #: N/A

Experiment ID#: OMP092502-4

Test Organism: Mysidopsis bahia

Test Type: Static Acute

Organism Age at Start of Test: 2 d

Sample Tested: Top of Pond #4 Cell

Sample Type: Grab

Sample Collection Frequency and Dates and Times: 09/24/02 @ 0715

Sample Collector: Andy Hall

Test Solution Renewal Frequency: N/A

Dilution Water Used: SS092402

Test Temperature: 25 ± 1°C

No. of Replicates per conc.: 2

Feeding prior to test: Normal

Chamber Size: 800 mL PP

Photo Period: 16h light/8h dark

Start of Test: Date: 09/25/02

End of Test: Date: 09/27/02

Equipment:

pH Meter: SA 720 (A) DO Meter: YSI 58 (b) SCT Meter: YSI 33 (A)

°C Measurement: Calibrated Thermometer

Salinity: SCT Meter

Chlorine: Fisher/Porter Amperometric Titrator

Test Method Reference: U.S. EPA. 1993. Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms. EPA/600/4-90/027F.

Delivered by: UPS

No. of Organisms per Replicate: 10

Feeding Regime: 2x daily

Test Volume: 450 mL

Test Duration: 48 h

Time: 1650

Time: 1557

# BIOLOGICAL MONITORING, INC. Acute Toxicity Test Data Summary

Client	Omega Protein	NPDES PERMIT #: N/A		
	Mysidopsis bahia		Date	Time
Test Organism  Experiment	OMP092502-4	Start Test	09/25/02	1650
Sample Tested	Top of Pond #4 Cell	End Test	09/27/02	1557

# RESULTS

		Water Chemi (Rai	istry Analyses nge)		
Conc.	Temp. (°C)	D.O. (mg/L)	pН	Salinity (ppt)	Surviva (%) 48 h
0 6.25 12.5 25 50	25 25 25 25 25 25 25	5.0-5.6 5.1-5.7 5.0-5.7 5.1-5.7 5.1-5.8 5.1-5.8	7.7-7.9 7.9-8.0 7.9-8.0 7.9-8.0 8.0-8.1 8.1-8.2	25 25 25 25 25 25 25	100 100 100 100 100 100

# STATISTICAL ANALYSES

est Method	LC50 (%)	95% Confidence Limits
N/A	>100 enerated due to lack of mortal	N/A

# ACUTE TEST DATA REVIEW CHECKLIST

	Number VA (700386 7 Outfall 002 Permittee Emerga Top of	Por	#4 cel
ermit l	Number VA (1503810 7 Outfall 002 Permittee Onega Top of	1000	
Test Da	te 9/25-27/02 Period Reviewed: QT SA AN 1st 2nd 3rd 4t	Other th	<del></del>
Cesting	Laboratory BMI		
#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
1.	Was the test performed as per schedule?		
2.	Was the correct test performed?	4	
3.	Was the correct type of sample used?		
4.	Were pH) temp, Cl of sample checked at sample site (or within 15 minutes of sample retrieval)?	,	gje,site (a vii)
5.	Was the sample packed in ice and chilled to ≤4° C for transport? NOTE: Frozen samples are not valid!	1	7,44"
6.	Were pH, DO, Cl, temperature and sample description recorded upon receipt?	/	840
7.	Does description (visual, scent) of sample (when received at lab) seem typical for this type of facility?	V	
8.	Was the test initiated within 36 hours of sample retrieval from sampler?		INDIE PAI CVI
9.	a. Was the sample DO ≥ 4.0 mg/l and ≤ saturation at 25° C prior to test initiation? (applies to D. ulex, C. dubia, M. bahia, P. promelas, C. variegatus) b. Was the sample DO ≥ 6.0 mg/l and ≤ saturation at 12° C prior to test initiation? (applies to O. pykiss)	/;	regatús)
10.	If 9 is "NO", was the DO adjusted to the acceptable range (see a. and b. above) prior to test initiation?	NA.	3
11.	If the sample had a chlorine residual, was it dechlorinated?	N4	
12.	Did the permit allow for dechlorination of the sample? (Only if it contains a compliance schedule for Cl limit or for dechlorination)	NA	<
13.	If the sample was dechlorinated, were controls treated with the same amount of dechlorination agent and run with untreated controls? (determines adverse effect of agent)	NA	
14.	Was the sample pH within the 6.0 - 9.0 range?	/	
15.	Was the age of the organisms in the correct range at test initiation?  a. P. promelas and C. variegatus - 1-14 days old, within 24 hours of age of each other  b. O. mykiss - 15-30 days old  c. D. pulex and C. dubia - <24 hours old  d. M. bahia - 1-5 days old, within 24 hours of age of each other	/	
16.	Were 5 geometric test concentrations (preferably 0.5 series) and 1 control set up?	/	
17.	Was the test chamber size acceptable?  a. P. promelas, C. variegatus, M. bahia - 250 ml minimum  b. O. mykiss - 5000 ml minimum  c. D. pulex and C. dubia - 30 ml minimum		
18.	Was the sample volume acceptable?  a. P. promelas, C. variegatus, M. bahia - 200 ml minimum  b. O. mykiss - 4000 ml minimum  c. D. pulex - 25 ml minimum		

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	МО
17	d. C. dubia - 15 ml minimum		
19.	Was the minimum number of replicates per concentration represented?  a. 2 replicates - P. promelas, O. mykiss  C. variegatus, M. bahia  b. 4 replicates - D. pulex, C. dubia		
20.	Was the minimum number of organisms in each replicate?  a. 10 organisms - P. promelas, O. mykiss  C. variegatus, M. bahia  5 organisms - D. pulex, C. dubia		
21.	a. Was the dilution water synthetic moderately hard water or 20% DMW? (applies to freshwater pecies P. promelas, O. mykiss, D. pulex, C. dubia) b. Was the dilution water synthetic moderately hard water or 20% DMW that had been adjusted to 20 ppt, or the same salinity as the receiving water? (applies to salt water species, C. variegatus, M. bahia).	-	_
22.	Was the dilution water hardness within the 80-100 mg CaCO/L?		
23.	Was the dilution water hardness within the 60-70 mg CaCO ₃ /U?		
24.	Was the dilution water pH within the range of 7.4 – 7.8 (7.9 – 8.3 for mineral water)?		
25.	a. Was the test temperature 25±1°C upon initiation, and throughout the test? (applies to P. romelas, D. pulex, C. dubia C. variegatus, M. bahia) b. Was the test temperature 12±1°C upon initiation, and throughout the test? (applies to O. sykiss)		
26.	Was the temperature measured daily in one replicate of each concentration?		
27.	Was the DO measured daily in one replicate of each concentration? (Exceptions to this requirement are for tests using D. pulex or C. dubia, where the 24-hr DO reading can be omitted to prevent organism stress.)		
28.	If the DO dropped to <4.0 mg/l, was aeration initiated? (Exceptions to this requirement are for tests using D puler or C. dubia, where aeration is impractical.)	NA	
29.	If aeration was necessary (and acceptable), were all test chambers aerated for the duration of the test, and the time at which aeration was initiated recorded?	NA	
30.	If aeration was necessary (and acceptable), was it applied at a maximum rate of 100 bubbles/minute so as	NA	
31.	Was pH measured at the beginning and end of the tes (daily s optimal) for a 48-hour test, or at 0, 48 hours, after renewal, and at 96 hours for a 96-hour test in one replicate of each sample concentration?	_	
32.	a. For a freshwater test, was conductivity measured at the beginning and end (also at renewal for 96-our tests) of the test in one replicate of each concentration? (applies to freshwater species P. pronelas, O. 19kiss, D. pulex, C. dubia)  The for a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour per a saltwater test).		
	labia)		-
33.	For freshwater tests, was the alkalinity measured in 100% effluent and the control at the beginning of the test?	NA	
34.	For freshwater tests, was the hardness measured in 100% effluent and the control at the beginning of the test?	N4	-
35.	a. For a test using Mysidopsis bahia, were the mysids fed Artemia nauplii daily?  b. For a 96-hour test using either Pimephales promelus or Cyprinodon variegatus, were the larvae of prior to sample renewal at 48 hours?	1	
<del></del> 36.	For a 96-hour test using either Pimephales promelas or Cyprinodon variegatus, was the sample used for	INA	1

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	renewal the original sample?		
37.	Was the daily photoperiod 16 hours light/8 hours dark?		
38.	Were the surviving organisms counted daily in all test chambers?	/	
39.	Was the test terminated at $48\pm1$ hours (less than 47 hours invalidates the test) or $96\pm1$ hours (less than 95 hours invalidates the test)?	1	
40.	Was the percent survival in each concentration recorded at the end of the test?	1	
41.	Was the percent survival in the controls ≥90%?		
42.	Was the LC ₅₀ correctly determined?		
43.	If the acute test was run in conjunction with a chronic test using the same species, was the acute test initiated with the second or third sample pulled for the chronic test? (Any sample other than the same sample used to initiate the chronic test is acceptable.)	NA	

Items in bold type (and shaded) are significant in that if they are answered "NO", the test is automatically deemed "not acceptable" and must be repeated to fulfill permit TMP requirements. Bold type items are numbers 3, 5, 8, 12, 15, 25, 26, and 41.

#### RESPONSE GUIDE

1 8.	Response should be "YES" or note the problem in the review	450
9 10.	If 9. is "NO", then 10. must be "YES" or the test is not acceptable them.	u IU.
11 13.	If 11. is "YES", then 12. and 13. must be "YES" or the test is not acceptable	
14 17.	If 14. is "NO", then 15., 16. and 17 must be "YES" or the test is not acceptable	le
18 43.	Response should be "YES" or note the problem in the review	
	***	

#### **RATING**

NOT ACCEPTABLE

Comments

# BIOLOGICAL MONITORING, INC. TOXICITY TEST DATA SHEET

0 - 0 - 0 - 0 - 0 - 0 - 0 - 0 -	111		- 00 1 111	
	NPDES#: NA	Client: Omega Protein	Outfall/Station Ng Topo & Pond #4	
Effluent/Sample: UMP093507-2	Sample Container: PE	Project Scientist: For A. Manhy	QC Officer:	
		0 6 7		
Sample Type:	Test Organism:			
Grab:	Species: Mysidopsis bahia	Test Mode: Static Acute	Test Duration: 48h	
Collection Date: 092402 Time: 7:15	Source: ABS	Test Start Date: 9/25/02	Time: 1650	e g
Composite:	Batch#: 185 092402	Test End Date: 9/27/02	Time: /557	
Collected From: Date: Time:	Age:   Do	Test Temperature: 25 ± 100	C Waterbath/Shelf#: 1/2	
Collected To: Date: Time:	No. of organisms/con. 2	O Dilution Water Used: 55 or	Temp. of Org. Stock Solution: >	5
180				

Con.	Test Cont. #	Nu	mber o	f Live (	Organis	sms	Di	issolve	d Oxyge	n (mg/	L)		02	рH				Sa	linity 0	<b>/</b> 00			Tem	perature	: (°C)	
mg/L		0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96	0	24	48	72	96
0	A	10	10	10			5.6	5.0	5.5			7.9	7.9	7.7			25	25	25			25	25	25		
	B	10	10	10			-							-		-										_
6.25	A	10	10	10			5.7	5.1	5.5			7.9	7.0	7.9			25	25	25			25	25	25		
	B	10	16	10									-			ē.							0			
12.5	A	10	10	10			5.7	5.0	5.5			80	8.0	7.9			25	25	35			25	25	25		
	B	10	10	10																						
25	A	10	10	10		-	5.7	5.1	5.4			8.0	80	7.9			25	25	25			25	25	25		
	ß	10	10	10																						
50	A	10	10	10			5.8	5.1	5.6			7.0	8.1	8.1			25	25	15			25	95	25		
	В	10	10	10																						
100	A	10	10	10	-		3.8	5.1	5.6			8.1	8.2	8.2			25	25	25			25	25	25		
	B	10	10	Į0																						
																						•				
Record	ied By:	71	344	Ban			- tom	34	B4-			34	Ban	3/1			BA	The	24		-	Elv	Zm	3/2		

BIOLOGICAL MONITORING , INC. Toxicity Test Procedure Check Sheet

	Toxicity Test Procedure	Check Sheet		Page	of
	ntainers used: PP	effluent	Specify below measured out per concer	no. milliliters (mLs) o	of diluent and
No. of replicates per concentration:	3	Ciriuciii	measured out per concer	manon in uns lest:	
Are all test chambers properly labeled?	Concent  mg/L	ration Other	Diluent	Effluent	Total
Specify vessel type and volume used to measure and deliver e	offluent		1000	0	1000
and diluent to test chambers:	6,24	5	937.5	62,5	1000
graduated cylinder (c): (d)a con an aince (c):	12.5	5	875	125	1000
graduated cylinder (s): /٥٠٥ ٥० २०० pipet (s):	25		760	2.50	1000
volumetric flask (s): other	50		500	500	1000
36	100		0	1000	1000
Water Depth Constant: Very Fed daily: Fed irregularly	dule g: Z x y (describe)  live (insertacteria	Aeration Pretest: None: Slow: Moderate: Vigorous:	(bubbles/min)	Screened Animal E Not used: Used: Photoperiod: 8h/16h: Other:	
0 1 4					,
Comments:			19		
			/#S		

# BIOLOGICAL MONITORING, INC. LABORATORY WORK ORDER

Project Manager: A. Sautt	Date: 9/25/02 Test Start Date: 9/25/02
Assigned to:	Test Start Date:
Client: Proter	Client's P.O.#:
Test ID#:	BMI Project #: 32 9/
Test Description: Samb	Test Prefix: OMP
Test Conditions (Circle Appropriate Choice)	
Achte/Chronic	
Organism: P.p., D.p., D.m., C.d., M.D., C.v., H.a., Ct	Toxicant: Toy of #4 for- Permit No.#: WH
Duration: 24h, (8h), 96h, 7d, 3 brood Renew at: 24h, 48h, 96h, daily, none,	Test Vol: #50 ml Chamber: 800 ml
Concentrations: [0, 6.25, 12.5, 25, 50, 100%] Other:	IWC:
Replicates: 1,0, 3, 4, 8, 10 Diluent: MHRW, Surface, Synthetic Seawater	Other:
Temperature: $12 \pm 1^{\circ}$ C, $20 \pm 1^{\circ}$ C, $23 \pm 1^{\circ}$ C, $25 \pm 1^{\circ}$ C Test Salinity: Freshwater, 13 ppt, 26 ppt	
Feeding: 1 x daily, 7x daily, 3 x daily, none, as specified	The second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second second secon
Dechlorination Sample: Yes/No/IF necessary	
Extra Controls:	
Special Conditions: In home feet	<i>t</i>
Comments:	

# SAMPLE COLLECTION - CHAIN OF CUSTODY FORM

To be completed by the person collecting the sample. See reverse side for instructions.

1. Client name Omson Prossin	5. Purchase order no
2. Sampler's name Anny Hore	6. Affiliation Prod. Mgn.
3. Sample source Top of pipe #4 Pour	d7. NPDES permit no./County
4. Outfall/station NON - NPDES	8. Test period for which data is being submitted:
9. Samplerelinquishedby: Any Hau 9.24/	02 Date; Received by: Ben A. Machen 19/10 Date;
Samplerelinquishedby:/_	
10. Type of sample collected:	Composite
11. Flow during sampling 145, 400  12. Type of container 1 GAL PIASTIC  13. Number of containers shipped 1	14. No. of subsamples 15. Frequency 16. Volume
Condition of Eff	fluent at Time of Collection
17. pH 7.44 18. Chlorine 19. Temperature: At collection point In collection device (comp. sample must be @	20. Is the sample:  Chlorinated  Dechlorinated  Unknown  Dechlorination method
Ship	ping Information
24. Was the sample packed with ice for shipment?_25. Custody seal in place by J. R. HALL	shipped 9/24/22 23. Time Approx 2:30  Date 9/24/22 Time 1:000000  tructions to Lab
	fractions to rap
<ul><li>26. Type of test(s) to be performed</li></ul>	28. Should ammonia be measured? (Yes or No)
30. I certify that the above information is	Signature Date
Alk_W# For	r BMI Use Only
Hard Wh  BMI Sample ID# Owl 09503-2 Received by  Upon arrival at BMI: Custody seal  On ice?  Visual description	B. Michigan Date 4/08/07 Time 1/:30  Femperature 3° pH V.3 Chlorine 400m/ DO 10.7  Salinity 5ppt Conductivity 900  Sample refrigerated yes
Test ID number(s) OMPenaso2 - 4	

# BIOLOGICAL MONITORING, INC.

1800 Kraft Drive, Suite 101 • Blacksburg, VA 24060 • Tel 540-953-2821 • Fax 540-951-1481 e-mail: bmi@biomon.com • website: http://www.biomon.com



CC; Jody Byan 12-14-01

# ACUTE TEST DATA REVIEW CHECKLIST

ermit N	Jumber VA 000 386 7 Outfall 002 Permittee Ovu ga		
Test Dat	Period Reviewed: QT SA AN lst 2nd 3rd 4	Other_ th	
Testing	Laboratory BMT		
#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
1.	Was the test performed as per schedule?	-/	
2.	Was the correct test performed?	_	
3.	Was the correct type of sample used?	/	
4.	Were pH, temp, Cl of sample checked at sample site (or within 15 minutes of sample retrieval)?	/,	gje site (n wil
5.	Was the sample packed in ice and chilled to ≤4° C for transport? NOTE: Frozen samples are not valid!	1	n 4.5°
6.	Were pH, DO, Cl, temperature and sample description recorded upon receipt?	/	
7.	Does description (visual, scent) of sample (when received at lab) seem typical for this type of facility?	_	
8.	Was the test initiated within 36 hours of sample retrieval from sampler?		mule rest eva
9.	a. Was the sample $DO \ge 4.0 \text{ mg/l}$ and $\le \text{ saturation at } 25^{\circ} \text{ C prior to test initiation?}$ (applies to $D$ . ulex, $C$ . dubia, $M$ . bahia, $P$ . promelas, $C$ . variegatus) b. Was the sample $DO \ge 6.0 \text{ mg/l}$ and $\le \text{ saturation at } 12^{\circ} \text{ C prior to test initiation?}$ (applies to $O$ . tykiss)		regatus)
10.	If 9 is "NO", was the DO adjusted to the acceptable range (see a. and b. above) prior to test initiation?	NA	7.4
11.	If the sample had a chlorine residual, was it dechlorinated?	N4	
12.	Did the permit allow for dechlorination of the sample? (Only if it contains a compliance schedule for CI limit or for dechlorination)	NA	; a:
13.	If the sample was dechlorinated, were controls treated with the same amount of dechlorination agent and run with untreated controls? (determines adverse effect of agent)	NA	
14.	Was the sample pH within the 6.0 - 9.0 range?	V	
15.	Was the age of the organisms in the correct range at test initiation?  a. P. promelas and C. variegatus - 1-14 days old, within 24 hours of age of each other  b. O. mykiss - 15-30 days old  c. D. pulex and C. dubia - <24 hours old  d. M. bahia - 1-5 days old, within 24 hours of age of each other	1	
16.	Were 5 geometric test concentrations (preferably 0.5 series) and 1 control set up? according to pen	nit or 1	no ro
17.	Was the test chamber size acceptable?  a. P. promelas, C. variegatus, M. bahia - 250 ml minimum  b. O. mykiss - 5000 ml minimum  c. D. pulex and C. dubia - 30 ml minimum	-	
18.	Was the sample volume acceptable?  a. P. promelas, C. variegatus, M. bahia - 200 ml minimum  b. O. mykiss - 4000 ml minimum  c. D. pulex - 25 ml minimum		

	С	HRONIC						ITY TEST	WITH M	YSIDOPS	SIS BAH	<u>IA</u>	
5			NL	IMBER O	F SURVI	VING MY	SIDS PEF	RDAY		FEMALE	FEMALE		NOT
Day of te Date	est	DAY 0	DAY 1	DAY 2	DAY 3	DAY 4	DAY 5	DAY 6	DAY 7	WITH EGGS	NO EGGS	MALE	NOT MATURE
CONC:	A												
i	В												
8	C				<u> </u>								
	D			II• ≅									
	E												
	F								i				
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	D		}										
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	F								<u> </u>				ļ
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		-		<u></u>									1

!	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	d. C. dubia - 15 ml minimum		
9.	Was the minimum number of replicates per concentration represented?  a. 2 replicates - P. promelas, O. mykiss  C. variegatus, M. bahia  b. 4 replicates - D. pulex, C. dubia	+repl	
20.	Was the minimum number of organisms in each replicate?  a. 10 organisms - P. promelas, O. mykiss  C. variegatus, M. bahia  b. 5 organisms - D. pulex, C. dubia  Output  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype  Cytype	s/repl	
21.	a. Was the dilution water synthetic moderately hard water or 20% DMW? (applies to freshwater pecies P. promelas, O. mykiss, D. pulex, C. dubia) b. Was the dilution water synthetic moderately hard water or 20% DMW that had been adjusted to 20 2 ppt, or the same salinity as the receiving water? (applies to salt water species, C. variegatus, M. bahia)	synthet is-rop	ic swe
22.	Was the dilution water hardness within the 80-100 mg CaCO/L?	NA	- 3-
23.	Was the dilution water hardness within the 60-70 mg CaCO ₃ /L?	NA	
24.	Was the dilution water pH within the range of $7.4 - 7.8$ ( $7.9 - 8.3$ for mineral water)?	302	
25.	a. Was the test temperature 25±1° C upon initiation, and throughout the test? (applies to P. romelas, D. pulex, C. dubia C. variegatus, M. bahia) b. Was the test temperature 12±1° C upon initiation, and throughout the test? (applies to O. sykiss)		e
26.	Was the temperature measured daily in one replicate of each concentration?	ļ - /	1
27.	Was the DO measured daily in one replicate of each concentration? (Exceptions to this requirement are for tests using D. pulex or C. dubia, where the 24-hr DO reading can be omitted to prevent organism stress.)	-	
28.	If the DO dropped to <4.0 mg/l, was aeration initiated? (Exceptions to this requirement are for tests using D. pulex or C. dubia, where aeration is impractical.)	NA	
29.	If aeration was necessary (and acceptable), were all test chambers aerated for the duration of the test, and the time at which aeration was initiated recorded?	N4	v.
30.	If aeration was necessary (and acceptable), was it applied at a maximum rate of 100 bubbles/minute so as not to cause injury to the organisms?	NA	
31.	Was pH measured at the beginning and end of the test (daily)'s optimal) for a 48-hour test, or at 0, 48 hours after renewal, and at 96 hours for a 96-hour test in one replicate of each sample concentration?	· /	
32.	a. For a freshwater test, was conductivity measured at the beginning and end (also at renewal for 96-our tests) of the test in one replicate of each concentration? (applies to freshwater species P. promelas, O. tykiss, D. pulex, C. dubia) b. For a saltwater test, was salinity measured at the beginning and end (also at renewal for 96-hour ests) of the test in one replicate of each concentration? (applies to salt water species, C. variegatus, M. ahia)	dnin	1
33.	For freshwater tests, was the alkalinity measured in 100% effluent and the control at the beginning of the test?	NA	-
34.	For freshwater tests, was the hardness measured in 100% effluent and the control at the beginning of the test?	NA	11 .,
	a. For a test using Mysidopsis bahia, were the mysids fed Artemia nauplii daily? fee 2x/0kly - 1b. For a 96-hour test using either Pinephales promelus or Cyprinodon variegatus, were the larvae	HADE Of H	ad not
35.	b. For a 96-hour test using either Pimephates prometas of Cyprindum variegation and education of the prior to sample renewal at 48 hours?		-

#	ACUTE DATA PARAMETER - (Some are organism specific)	YES	NO
	renewal the original sample?		
37.	Was the daily photoperiod 16 hours light/8 hours dark?	~	
38.	Were the surviving organisms counted daily in all test chambers?		
39.	Was the test terminated at 48±1 hours (less than 47 hours invalidates the test) or 96±1 hours (less than 95 hours invalidates the test)?	V	
40.	Was the percent survival in each concentration recorded at the end of the test?	_	
41.	Was the percent survival in the controls ≥90%?		
42.	Was the LC ₅₀ correctly determined?	/	
43.	If the acute test was run in conjunction with a chronic test using the same species, was the acute test initiated with the second or third sample pulled for the chronic test? (Any sample other than the same sample used to initiate the chronic test is acceptable.)	NA	

Items in bold type (and shaded) are significant in that if they are answered "NO", the test is automatically deemed "not acceptable" and must be repeated to fulfill permit TMP requirements. Bold type items are numbers 3, 5, 8, 12, 15, 25, 26, and 41.

### RESPONSE GUIDE

1 0	To a fit wrong a second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the second of the	(30)
1 8.	Response should be "YES" or note the problem in the review	water off
9 10.	If 9. is "NO", then 10. must be "YES" or the test is not acceptable	" then 10"
11 13.	If 11. is "YES", then 12. and 13. must be "YES" or the test is not acc	ceptable
14 17.	If 14. is "NO", then 15., 16. and 17 must be "YES" or the test is not	accentable
18 43.	Response should be "YES" or note the problem in the review	

#### **RATING**

NOT ACCEPTABLE

#### Comments

#### Mosca, Denise

From:

Bill Black [bilenpro@swbell.net]

Sent:

Wednesday, October 16, 2002 1:40 PM

To:

Mosca, Denise

Subject:

RE: Omega



Omega amm and cyanide and cree...

Denise, Here is a spreadsheet that contains additional ammonia and

cyanide.

Do you know if Curt received the Dye Tracer report??

Bill

----Original Message----

From: Mosca, Denise [mailto:dmmosca@deq.state.va.us]

Sent: Tuesday, October 15, 2002 2:37 PM

To: Bill Black

Subject: RE: Omega

Oh, sure, his is cjlinderma@deq.state.va.us His name is too long to pick up the n at the end of his name in the email address. denise

Denise M. Mosca Environmental Engineer Sr. DEQ-Kilmarnock Field Office P.O. Box 669 Kilmarnock, Va. 22482 804-435-3181 fax 804-435-0485

> DEQ-Kilmarnock Field Office

> P.O. Box 669

- > ----Original Message-----> From: Bill Black [SMTP:bilenpro@swbell.net] > Sent: Tuesday, October 15, 2002 3:33 PM > To: Mosca, Denise > Subject: RE: Omega > Denise, I emailed both the report and the data to Dale and he received > it. I can try to email to Curt but need his email address. > Bill > ----Original Message-----> From: Mosca, Denise [mailto:dmmosca@deq.state.va.us] > Sent: Tuesday, October 15, 2002 1:00 PM > To: Bill Black > Subject: RE: Omega > OK, got that! > denise > Denise M. Mosca > Environmental Engineer Sr.
  - 1

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> Kilmarnock, Va. 22482
> 804-435-3181
> fax 804-435-0485
> > -----Original Message-----
> > From: Bill Black [SMTP:bilenpro@swbell.net]
           Tuesday, October 15, 2002 12:52 PM
> > Sent:
> > To: Mosca, Denise
> > Subject: RE: Omega
>>
> > Denise, it looks like it takes "days" for you to receive emails with
> > huge attachments. Since Thursday when I sent the two emails you just
> > received, I have finished the Dye Tracer report and have made some
> > corrections. Therefore, discard what you have received by email and
> > for the Fedex man to deliver a CD today which has the final report
and
> > all data.
> >
> > Bill
> >
> > -----Original Message-----
> > From: Mosca, Denise [mailto:dmmosca@deq.state.va.us]
> > Sent: Tuesday, October 15, 2002 9:21 AM
> > To: Bill Black
> > Subject: RE: Omega
> >
> > I got both emails ok, Bill--
> > denise
> >
> > Denise M. Mosca
> > Environmental Engineer Sr.
> > DEQ-Kilmarnock Field Office
> > P.O. Box 669
 > > Kilmarnock, Va. 22482
 > > 804-435-3181
 > > fax 804-435-0485
 >>> ----Original Message-----
 > > From: Bill Black [SMTP:bilenpro@swbell.net]
 > > Sent: Thursday, October 10, 2002 4:22 PM
 >>> To: Mosca, Denise
 >>> Subject: Omega
 >>>
 > > > Denise, I will send two emails, this one contains the text.
 > > > Bill << File: header.htm >> << File: Dye Narrative rev 1.doc >>
 > >
 >>
 >
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# Omega Protein--Reedville Sampling Results for **CYANIDE**

	Omega Effluent		Cockrell Creek water				
		Ŭ			End of	Between	
	Outfall	Outfall	Outfall	at Intake of	Mainstreet	Omega &	Type of
Date	001 (future)	004/005	002	001	Reedville	Ampro	Sample
10/18/01	<.01	<.01	<.01				water
11/15/01	0.042*						water
12/4/01	1.762*						water
5/9/02	102			0.02			water
8/12/02				<.01	<.01	<.01	water
8/13/02	<b></b>			0.1			SLUDGE
8/15/02	0.03						water
8/15/02	0.09						water
8/19/02	0.05				0.01	0.03	water
8/20/02	0.12						water
8/21/02	0.12		<.01				water
8/22/02	<.01						water
8/22/02	<.01	+2-1	<.01				water
8/26/02	\ \.\tag{01}		10.	<b>—</b>	0.02	0.03	water
9/3/02					0.44	0.79	water
9/4/02	2.99						water
9/5/02	2.95						water
	0.48						water
9/5/02	0.46						water
9/6/02	0.14				<.01	<.01	water
9/9/02	101			+	101		water
9/10/02	<.01						water
9/11/02	0.059		-				water
9/13/02	0.005						water
9/13/02	<.005			<del></del>	<.005	<.005	water
9/16/02	0.040			1	1.005	1.000	water
9/17/02	0.010						water
9/19/02	0.019					-	water
9/19/02	0.009				0.009	0.043	water
9/22/02					0.009	0.043	water
9/24/02	0.089		-	1			water
9/25/02	0.070						water
9/26/02	0.048		ļ				water
9/27/02	0.198				_ 00E	0.042	
9/30/02					<.005	0.042	water
10/1/02	0.075		1				water
10/2/02	0.341						water
10/3/02	0.170					-	water
			<b>_</b>	-			1
							1

¹⁾ The Monday sampling of Creek media is performed in an effort to remove any influence of the discharge from Omega's processing. Omega usually completes processing for the week on Saturdays. Thus, by Monday, the Creek would have had two days to flush itself out by tidal action without any Omega discharges.

²⁾ The sample taken on Tuesday September 3 was the day after Labor Day (Omega did not fish on Labor Day)—there likely was a lot of boat traffic on Cockrell Creek on Labor Day that might have agitated bottom sludges.

³⁾ The sampling of 5/9/02 was before fishing had started for 2002

⁴⁾ Data from the 001 and 004/005 samples taken in 2001 ( indicated by an  *  ) are questionable due to possible cross communication

⁵⁾ Starting with the 9/13/02 sample, the Detection Limit was lowered to 0.005. According to the lab, it is not possible for lower Detection Limits.



# FAX

TO: DENISE MOSCA

FROM: LYELL JETT

DATE: 12-11-02

FAX:

PHONE: 435-0485

PAGES: 6

SUBJECT:

BMP reports Nov. 2002



# ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY BMP Compliance Report

Facility Name: Omega Protein Address: Reedville, Va.	as
VPDES Permit No.: VA0003867  Report Period: From //////ZTo ///Z	102
Paint Area	COMPLIANCE / NONCOMPLIANCE * (check as appropriate)
·	
*Comments on Noncompliance	
Name of Principal Exec. Officer or Authoriz	red Agent / Title
I certify under penalty of law that this docume in accordance with a system designed to information submitted. Based on my inqui directly responsible for gathering the informative, accurate and complete. I am awar including the possibility of fine and imprison U.S.C. paragraph 1319. (Penalties under imprisonment of between 6 months and 5	ent and all attachments were prepared under my direction of supervision of assure that qualified personnel properly gather and evaluate the ray of the person or persons who manage the system or those persons ation, the information submitted is to the best of my knowledge and belief that there are significant penalties for submitting false information, onment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 are these statutes may include fines up to \$10,000 and or maximum years).
Signature of Principal Officer or Authorize	d Agent / Date

# ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY EMP Compliance Report

Facility Name: Omega Protein Address: Reedville, Va.	<u>g</u>
VPDES Permit No.: VA0003867  Report Period: From 113102 To 119	102
Report ones.	
Paint Area	COMPLIANCE / NONCOMPLIANCE * (check as appropriate)
×	
*Comments on Noncompliance	
$\sim$ 0	1/2 Marine
Name of Principal Exec. Officer or Authoriz	ed Agent / Title
I certify under penalty of law that this docume in accordance with a system designed to information submitted. Based on my inquir directly responsible for gathering the information accurate and complete. I am aware	ent and all attachments were prepared under my direction or supervision assure that qualified personnel properly gather and evaluate the y of the person or persons who manage the system or those persons ation, the information submitted is to the best of my knowledge and belief that there are significant penalties for submitting false information, nament for knowing violations. See 18 U.S.C. paragraph 1001 and 33 or these statutes may include fines up to \$10,000 and or maximum
Signature of Principal Officer of Authorized	Agent / Date

# ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY EMP Compliance Report

Facility Name: Omega Protein Address: Reedville, Va.	× (9)
VPDES Permit No.: VA0003867	
Report Period: From 1110102 To 1116	102
Paint Area	COMPLIANCE / NONCOMPLIANCE *  (check as appropriate)
	<u> </u>
*Comments on Noncompliance	
Name of Principal Exec. Officer or Authorize	ed Agent / Title
I certify under penalty of law that this docume in accordance with a system designed to information submitted. Based on my inquiry directly responsible for gathering the information, accurate and complete. I am aware	nt and all attachments were prepared under my direction or supervision assure that qualified personnel properly gather and evaluate the y of the person or persons who manage the system or those persons tion, the information submitted is to the best of my knowledge and belief that there are significant penalties for submitting false information, ment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 or these statutes may include fines up to \$10,000 and or maximum ears).

### ATTACHMENT C DEPARTMENT OF ENVIRONMENTAL QUALITY **EMP Compliance Report**

directly responsible for gathering the information, the information submitted is to the best of my knowledge and belief true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. See 18 U.S.C. paragraph 1001 and 33 U.S.C. paragraph 1319. (Penalties under these statutes may include fines up to \$10,000 and or maximum

VPDES Permit No.: VA0003867		
Report Period: From ///1/102 To //	123102	(47)
Paint Area	COMPLIANCE / NONCOMPLIANCE (check as appropriate)	<b>E.*</b>
	*	
\$		8€1
	-	er er
*Comments on Noncompliance	w.	
Name of Principal Exec. Officer or Author	Dent Mavey	=
in accordance with a system designe	ument and all attachments were prepared under to assure that qualified personnel propagity of the person or persons who managements, the information submitted is to the because the contraction of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of the person of th	e the system or those persons

imprisonment of between 6 months and 5 years).

Signature of Principal Officer or Adthorized Agent /

Facility Name: Omega Protein Address: Reedville, Va.